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THE

AMERICAN

AGRICULTURIST;

DESIGNED TO

IMPROVE THE PLANTER, THE FARMER, THE STOCK-
BREEDER, AND THE HORTICULTURIST.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE
MOST NOBLE EMPLOYMENT OF MAN.—WASHINGTON.

A. B. ALLEN, EDITOR.

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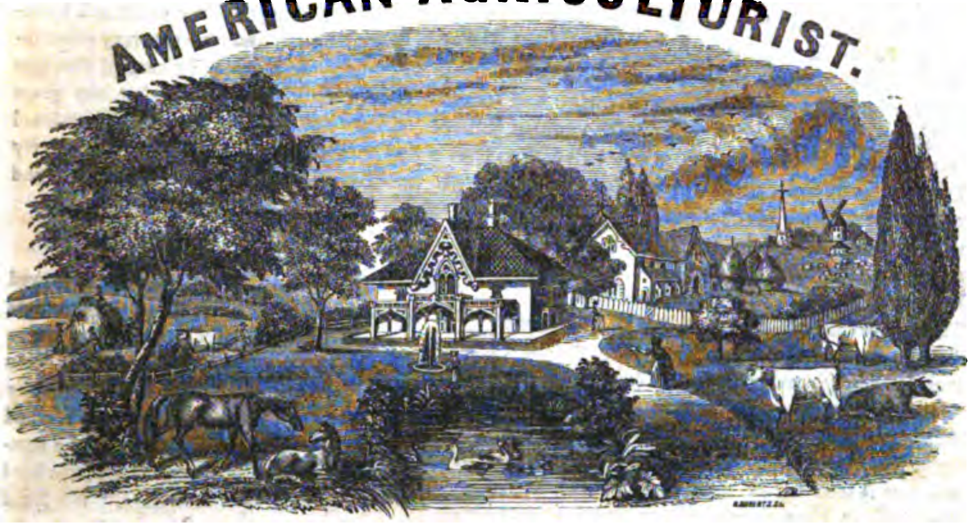
THE AMERICAN AGRICULTURIST.



Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. II. **NEW YORK, APRIL, 1843.** **NO. I.**

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

TO AGRICULTURAL MECHANICS.

We wish to apprize those of our mechanics who are engaged in making farming implements of any kind, that several Agricultural Societies have been formed recently at the south, and the members are desirous of obtaining specimens of all our northern improved threshing-machines, hay and cotton-presses, straw-cutters, corn-shellers, ploughs, cultivators, harrows, &c., &c.; but as many of these are of a high price, they can not feel justified at the present time in ordering them, till they ascertain whether they are likely to suit their purposes. They would prefer to see the venders of them in their part of the country, and would engage to render them every facility in their introduction. But where other engagements prevent northern mechanics visiting the south, the gentlemen composing the committees would engage to pay the freight and charges on all implements sent them for trial and examination; and dispose of them at the original price, and charges out added, free of commission. We give this announcement by request from the south, and can only add, that we know the gentlemen making it to be of high standing and character; and should any of our mechanics wish for further information on this subject, and will call upon or address us post paid, we will furnish them with full particulars. A great change is taking place in regard to agriculture at the south, and the planters there are in want of many implements different from those now in use among them. It is a fine section of the country for emigration.

SPRING WHEAT.

This valuable grain flourishes successfully in many soils when winter or fall-sown wheat will not succeed. Perhaps the best plan of raising it is to plough late in the fall, particularly if the land be a clay or clayey loam, which is the favorite soil for wheat. By ploughing in the fall, the winter frosts thoroughly pulverize the soil, and make it work much freer and easier than it otherwise would the following season. As soon as the heavy frosts are out of the ground in the spring, and it becomes a little warm, give it a second ploughing, and then sow the grain, harrowing it in well, and finishing with the roller.

Another method has been practised with success by an acquaintance of ours. Having his ground prepared as above some three years since, he commenced sowing his wheat in March, intending to harrow it in as usual, the ground being tolerably well settled and dry. Before the sowing was finished, a violent snow-storm came on, which prevented harrowing in the grain, although the sowing was completed in the storm. A rain followed, which prevented any after harrowing, and then frosts set in, freezing the surface of the ground for some days. Mild weather soon succeeded, the wheat came up finely, grew vigorously, and produced the best crop he ever raised. This *accident* was so successful, that he practised it the next year, by sowing before the frost left the ground, and the crop was like the last, a good one.

The upheaving of the ground by the frost opens it for the reception of the seed; when the frost leaves, it becomes pulverized and levelled down by its action, which sufficiently covers the seed and renders the harrow unnecessary. We have usually sowed our grass seed in this manner, and found that it took better than in any other way. Some farmers thus sow their rye and winter wheat, and although occasionally successful, it often fails, and we can not recommend the practice. The wheat used in the above experiment was the Siberian, a plump reddish berry on a short straw, and it is highly approved in the interior of this State.

ARRANGING CATTLE IN SUMMER PASTURES.

Oxen and steers may run together; cows, heifers, yearlings, and large weaned calves, each class by themselves. Bulls may run with oxen if not ill-tempered. Horses are better alone, and so are sheep. Pastures ought to be divided so as to admit of a change, and it is very desirable to have every pasture watered with a running stream or spring.

EFFECT OF MARLING AND MODERATE CROPS.

We notice in Mr. Ruffin's "Addendum" to his Essay on Calcareous Manures, that he has given a table of crops on his "Coggin's Point farm," with slight interruption, from 1813 to 1842 inclusive, in which the number of acres in wheat were from 78 to 250, and the average yield from 5 to 13½ bushels per acre. The smallest yield was produced on the smallest quantity of land, *unmarled*, while the largest yield (nearly 3 to 1 of the smallest) was produced the last season on the marled. The number of acres in corn during the same time, were from 70 to 188, and the average, from 8⅙ to 25½ bushels per acre; the lowest average being produced on the unmarled, and the highest on the marled land.

The above data from a close observer, shows the very low point which agriculture can reach by injudicious management, and also the very great increase which may be attained by careful management. The best yields, considering the great number of acres cultivated, and on land reclaimed from a perfectly exhausted condition, exclusively by the use of marl, shows good management, and a rapid improvement.

HEREFORD CATTLE.

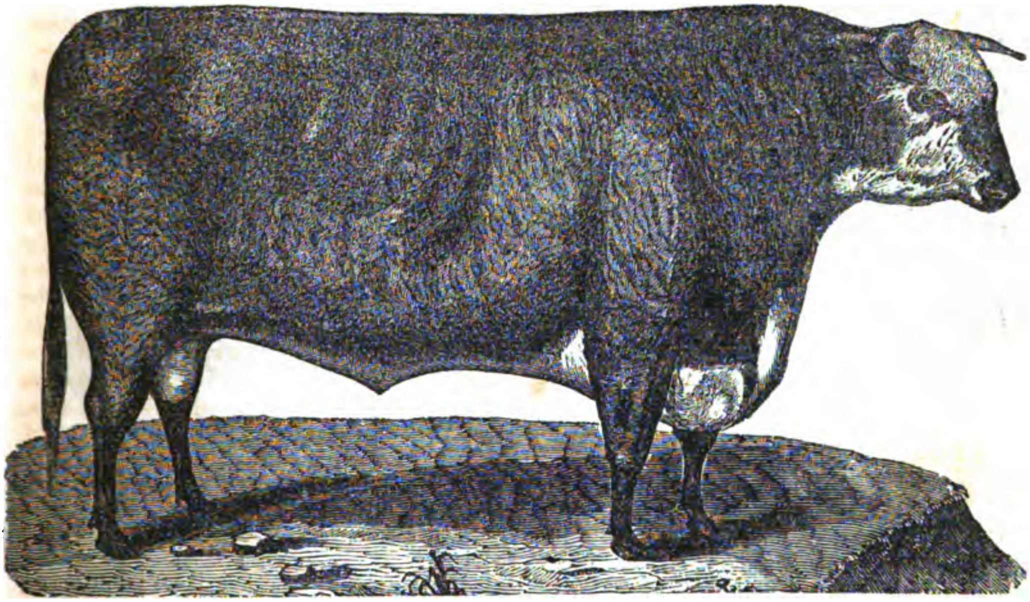
Among the various importations of improved stock, which have been made from time to time into this country, few are likely to become more distinguished, than the splendid herd of Herefords brought over here within the three past years, by Messrs. Corning and Sotham of Albany. We had merely seen a few specimens of them in the summer of 1840, but had no idea of the large fine herd there till we visited it last December. We found them located on a beautiful farm lying on the west bank of the Hudson, about two miles below Albany, and in winter quarters. The buildings for their accommodation are not expensive, yet ample; with abundance of yard room open only to the south, and well protected on the other three sides by the barn and sheds. The arrangement of these buildings, both interior and exterior, struck us as among the most convenient we have ever seen, and we hope we may be furnished with a plan of them hereafter, to embellish a page or two of our paper.

Since Youatt wrote his work on British Cattle, there has undoubtedly been a very great change for the better in Herefords; and we question whether any breed in England, has been more generally improved within the past twenty years. We must confess that we were greatly surprised at the superb show that they made, at the various agricultural society meetings which we recently attended in England, and certainly one of the finest lots of cattle we ever saw, was a large herd of pure Hereford steers, grazing upon the banks of the Thames, in the neighborhood of the magnificent old town of Oxford. As fat cattle, the Herefords have lately held a sharp rivalry with the Durhams, and their beef is in high favor in the London markets. They make no claim as yet to being great milkers; but this is a quality in the animals which can be improved, and we understand the most eminent breeders are beginning to pay attention to this point, and we trust that they may meet with success, for we are the friends and well-wishers of improvement in all things.

We think the stock at Albany would compare favorably with the best we met of this breed in England; and well they may, since Mr. Sotham had much experience with Herefords there before coming to this country, and he crossed the Atlantic twice from New York, for the express purpose of making his own selections; and we think he chose with a good eye and much judgment. We found these cattle to excel particularly in the brisket and loin, two very important points in all animals destined for the butcher, and especially necessary, if we expect to make them into beef for the English market; and being of great constitution and hardy, they make most excellent grazing stock, and are consequently somewhat sought for in various parts of the United States for this purpose. We also found them much better handlers than we expected, and with good coats and reasonable fine skins.

Mr. Sotham was so unfortunate as to lose his very fine bull Major, on his voyage out from England last year, which was much to be deplored, as he was said to be equal to anything ever bred there. But in Sir George, we found quite a superior animal, and we here introduce a cut of him.

HEREFORD BULL SIR GEORGE, IMPORTED.—(FIG. 1.)



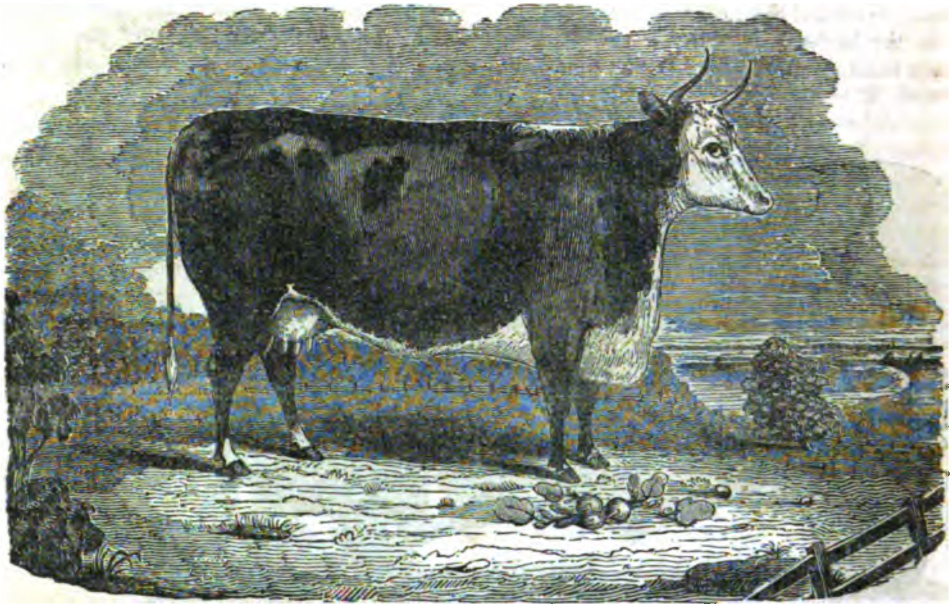
The Property of Messrs. Corning and Sotham, Albany, N. Y.

This bull is improving with age, and when full grown will make a large and handsome show. In another stable alongside of him was Young Prize. His frame is not quite so large as that of Sir George, but if we recollect right, he is somewhat finer and more finished in his points. He also shows great constitution, and will undoubtedly make a superior animal.

Beyond these came a lot of bull calves, one of which struck us as of uncommon promise, and he stands in such high favor with his breeder, as leads him to believe that he may yet make the place of Major good. We trust these bulls will not be neglected by those engaged in rearing working cattle, and that they may be effectually tried in crossing on the native stock for this especial purpose. We have seen repeated crosses of this kind throughout the United States, from Hereford bulls far inferior to this importation, and the improvement was quite manifest. We recollect particularly, a recent instance of this kind, in visiting the extensive rice plantation of Mr. Zeranqué, on the Mississippi, a little above New Orleans. He kept about 70 head of working oxen, and among them all, there was nothing equal to a few specimens of the cross of the Hereford, either in size beauty of form, or strength, quickness, and endurance in the yoke.

There are twenty-three full bred Hereford cows to calve in the spring in this herd, and an excellent even lot they are too. The queen of these for the present is Matchless, and right well is she named, for there are few animals of any breed within our knowledge that can beat her in form and quality, and we regret that the cut we have of her does not more fully represent her size and massiveness. It is, however, a tolerable portrait, and shows her great brisket and fine loin advantageously. Perfection is a noble large cow even now, though only 3 years old; and Victoria, Matilda, and Gay, are much to be admired. Some of them, Mr. Sotham thinks, will prove good milkers. He is determined to see what they can do in this way, and give us the result of the trial.

HEREFORD COW MATCHLESS, IMPORTED.—(FIG. 2.)



The property of Messrs. Corning and Sotham, Albany, N. Y.

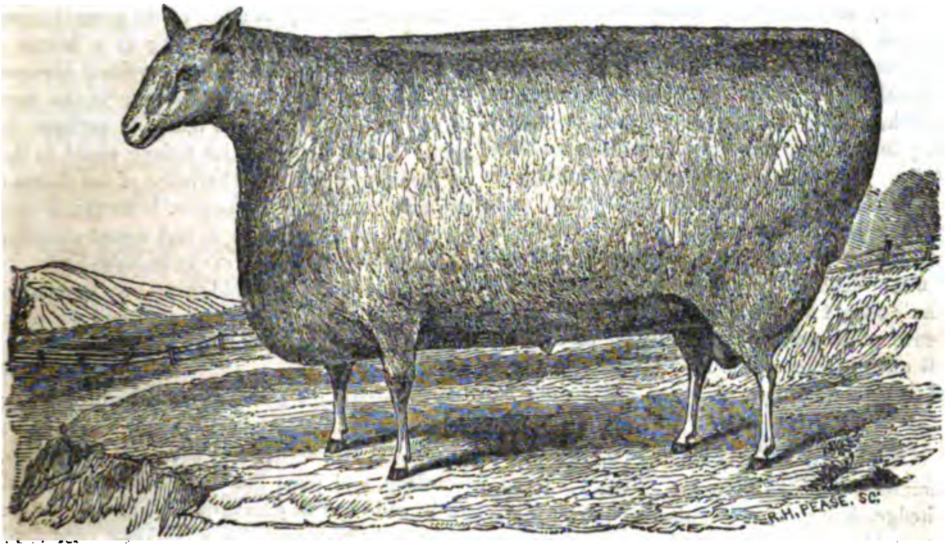
COTSWOLD SHEEP.—After looking over the cattle pretty thoroughly, we next examined the sheep, and must confess that we think it the best Long-woolled flock that we have yet seen in America. These Mr. Sotham also selected himself, and imported. They were chosen from the celebrated flocks of Mr. Hewer and other eminent breeders of Cotswolds. These animals are of great size, and yet very fine generally in all their points, much more so than people unacquainted with the breed could suppose. We should think the largest would weigh at least 250 pounds dressed, if well fattened; their weight of fleece is in proportion. Fat-rumps sheared 14½ pounds last year; and Splendid, a perfect model we were going to say of this breed of sheep, gave 11 pounds. The lambs at one year old average within a fraction of 9 pounds each, and the breeding ewes full 8 pounds, which is certainly a great yield. The wool is very long, and is such as the English manufacture their worsted goods from. The animals are small consumers for their size, and are the most quiet things imaginable.

We give a cut of one of these Cotswold bucks on another page, that the reader may be enabled to understand more fully what we are talking about, and subjoin extracts from a letter also upon their origin and breeding, which Mr. Sotham has been so obliging as to forward us.

When I was last in England, I endeavored to trace the origin of the Cotswold breed of sheep, but could not succeed with sufficient certainty earlier than the year 1798. I found that the Cotswolds at that period possessed very long faces; long, thick ears; heavy, curly fleeces; high shoulders, and saw backs; but invariably good rumps, and *legs of mutton*, denoting very strong constitutions, and were principally kept on the Cotswold Hills in Gloucestershire.

Many improved them by crossing with the Leicester, which was undoubtedly an excellent cross, when a judicious selection was made; but the majority of their owners, wishing to reduce their size and give them more symmetry, adhered to the finest Leicester with their short ears, short faces, fat backs, small bone, and a finer quality of wool, thinking such a course would produce their object; but the result was unfavorable, for they found when they lost their thick ears and curly coats, that they also lost their constitutions. My opinion is, that the curly, silvery skin is a good criterion of early maturity, a right quality of flesh, and a hardy animal.

COTSWOLD BUCK SPLENDID, IMPORTED.—(FIG. 3.)



The Property of Messrs. Corning and Sotham, Albany, N. Y.

I have always noticed on shear-days, that this kind of fleece covers more and a better quality of flesh than the finer or longer fleeces; and I maintain that a *practical man*, when shearing a sheep, can tell by the cut of the wool whether it grew from a *good root*. I have remarked this often to many of the best old shepherds (with whom I have sheared numbers, joining them in their merry jokes and cheerful songs of *sheep-shearings*), and they would readily agree with me, and always persuade their masters to keep such kind of ewes as long as they would breed a lamb, so that they might obtain the whole flock of that description. They found they would keep on less food, were less trouble, less liable to disease, and always in good condition.

I have an idea that a person will remember the points he wishes to improve, far better when shearing than at any other time. A *good shepherd* knows the features of each sheep, equally as well as he does those of his own children, and *remembers* their faults when he discovers them, therefore when culling his ewes he refers back to shear-day; this I know to be the fact, and such close observation is absolutely necessary, to give credit to a flock.

Those who selected a ram with a good curly skin from the Leicester, made vast improvements on their flocks, but it was the close observation of a faithful shepherd that opened their eyes to it, when the breeder himself had not gone through the whole *practical part*, which I would strongly recommend, as it is the only sure way of knowing the facts; and let me tell you, there are many of the first breeders that depend altogether on their shepherd's selections, and they take them to several different ram-sales before they select one to their taste. Time is not thrown away in searching for good males, nor is the purse *ultimately* diminished by giving a *good* price. If *judgment directs the hand* of either master or shepherd, the flock will keep its standing; but I have seen in many instances, where flocks have very much degenerated by the absence of the latter.

There are many of the Cotswold breeders who say they have not a drop of Leicester blood, but have improved their symmetry by a close attention to the smaller male of the original, with a fat back and curly skin in view, still keeping their long faces and ears, rumps and legs of mutton; thus producing earlier maturity, a better mixture of fat and lean, than the Leicetser cross.

This seems to me *practical reasoning*, for the butchers *all* say, that if the Leicesters had more lean and less fat, they would suit their customers much better. I allow that the Leicester men, and those who crossed from them, have won more prizes than the Cotswolds, because symmetry is always observed in every male animal, and the latter have not had time to arrive at perfection. I believe it is candidly admitted that the Cotswolds are decidedly the most profitable sheep in the world, and will soon be able to carry away the first premiums.

We can make the same observations upon the keep of the above stock, as we did on that of Col. Sherwood and Mr. Prentice. We found the cows living upon rye-straw, with a few turneps, and the sheep the same. We believe, as a matter of health, and for the purpose of giving a greater variety to the food, the young animals had a little oil cake. This is highly approved of in England for the young of all kinds of domestic stock, as it keeps the bowels open, and generally prevents scouring or costiveness; it also gives a good tone to the stomach, and seems to make them relish all their other food much better; and our own experience of several years of feeding oil-cake in small quantities, confirms all that has been told us of its good qualities.

Tour in England. No. 12.

English Fences.—These are of various kinds, the hedge, however, predominating; and no one feature adds more to the rural beauty of the country than these living walls of verdure,—picturesquely dividing it in a thousand devious ways, and making many a spot, that would otherwise appear desolate and bare, look charmingly pretty and inviting. Quite a variety of shrubs and trees are made use of here for hedges, but those we most admired were the holly. This is somewhat different from the American holly,—its leaves being variegated with yellow spots, and it has small thorns, like our *Ilex opaca*, protruding from their edges. It is an evergreen, and adds greatly to the beauty of the winter landscape. In front of the house, and around the ornamental grounds and gardens, portions of the hedges are trained in what is termed *topiary* work. This represents any animal, a deer for example, in a recumbent position, with head and antlers erect; a peacock, with its tail wide spread; a castle, a summer-house, or some other fantastic piece, which the *very nice* often take upon themselves to laugh at as stiff and studied; yet to us these things have a great charm, for they seem to harmonize with the scenery and the antiquated buildings around; and we have often paused to contemplate this fancy work of the rustic hedge-clipper, with a vague, indescribable satisfaction, thinking, perhaps, the same hand that guided the hedge-shears, might, under more favorable circumstances, have won renown with the pencil or chisel; for it is our humor to clothe all things as often as possible in the beautiful, and imagine the illustrious. In this way, wandering along the world, we have cheated many a dull hour of its tediousness and melancholy.

Next to the holly we admired the gorse or furze; a sharp, prickly shrub, growing to a height of five feet or more, and bearing a yellow blossom. But the most common hedge here is the hawthorn; and this upon the whole is perhaps the best. We do not think its foliage equal to that of the maple and other varieties of the thorns of our own country; its blossom, however, is quite as pretty, and much like it, and comes out about the same period of the year as in New-York. Its growth is not near so rapid as our own hawthorns, nor is it as suitable for our climate, and when cultivated here as a hedge, has generally proved a failure.

The general method of growing hedges in England, is to dig a ditch along the line where it is to be planted, four to five feet wide, and two to three feet deep, and plant the thorn upon the embankment made by this excavation. This method has a double advantage; for it makes a good ditch, which is highly necessary to assist in carrying off the surface water in this moist climate, and the earth thrown up from it, forms an excellent bed, with a double depth of soil on which to plant the thorn; and the fence thus grows more rapidly and stronger than it otherwise would. The ditch and embankment also add to the strength and security of the fence, making it more difficult to get over.

Before setting out a hedge, the land along the line is generally put under cultivation the previous year, so as to get it mellow and in good tilth. A potato crop is the best preparation, and the quicks are usually of the second year's growth, and taken up from a bed where they are cultivated for this purpose. They are planted about six inches apart, in double rows along the line, the quicks of the second row being placed opposite the centre of the space occupied by the first. Sometimes, when a very strong fence is required, three rows are planted; but two are generally sufficient, and we have seen quite good hedges formed from a single row alone.

An important point in the management of the hedge, is to keep it thick, especially near the ground; and in order to effect this, it must be grown broader at the base than the top, so that every part may have the benefit, in an equal degree, of moisture, light, and air. The best, therefore, are trimmed every year to a width of five feet or so at the bottom, and nearly sharp at the top, giving the hedge the form, on both sides, of the steep roof of a house. Yet they flourish very well here trimmed in a rounded form at the top, which is a more graceful shape for them; and we have frequently seen a good strong fence of the hawthorn, growing up in a natural way, seven to ten feet high, and still so close at the bottom, as to be completely impervious to domestic animals above the size of a large rabbit. If we recollect right, when thus left to grow naturally, the quicks were planted closer together than when in double rows.

In those districts where stones abound, they are much used for fences, and are laid up in a handsomer and stronger manner than we are accustomed to at home. We have seen miles after miles of them along the highway, especially such as enclose the parks, pointed with as much neatness as the mason's work of a house. The ugly zig-zag fences which are so common in the United States, are unknown here; neither is our more sightly post and rail fence to be seen, timber being too scarce and valuable for such purposes. Posts and sawed stuff are occasionally found; but what is more common, is to set posts about eight feet apart, and mortise the bars into them, one at the top, and the other near the bottom, and to these nail thin slats, four to five feet long, split out in the same manner as we rive staves, and put them on perpendicularly to the cross pieces. This makes a close good fence, and when whitewashed, with rows of trees planted along the line, it presents a very neat appearance. Clay walls, built *en pisé*, are not sufficiently common to speak of in England, the climate being altogether too moist for them to endure long, as a general rule.

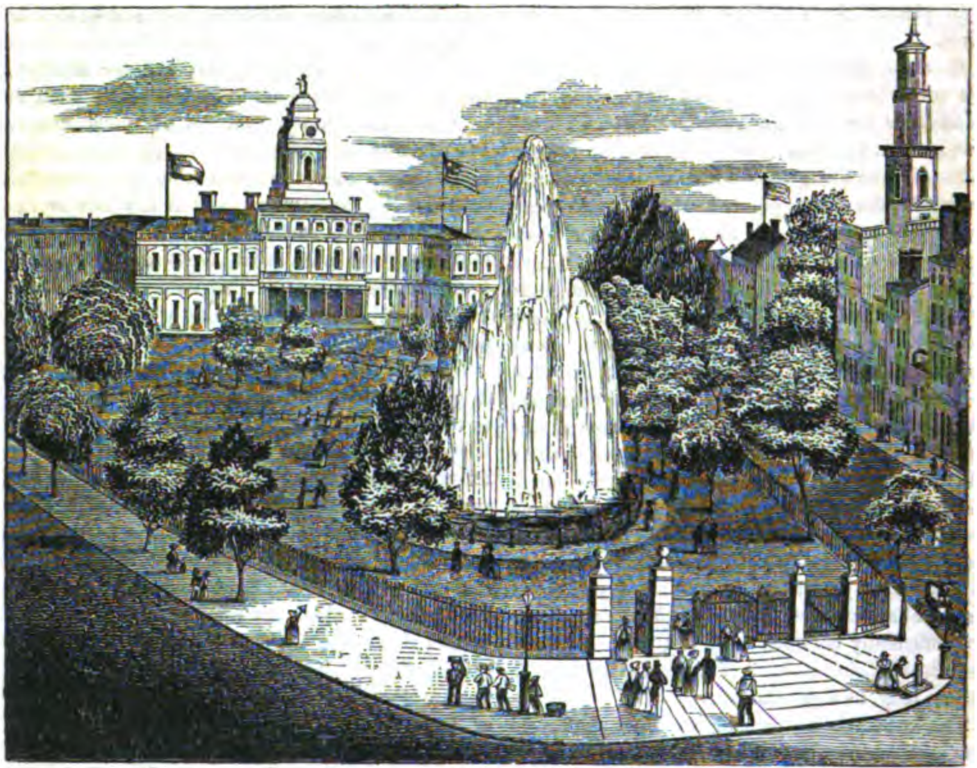
The last method of fencing which we shall mention is embankments. These are laid up, slightly sloping with dirt, about four feet high, excavated from a ditch running along the line of the fence, and are then sodded up their sides and on the top. This makes a much better fence in a tenacious clay soil than we could have supposed; and the only objection is, that the sod is very liable to work out in squares, leaving the earth then to crumble down, and the fence in continual want of repair. In a climate of the severity of the winter of our northern and middle states, a sod fence would not answer at all; for the frost would cause it to crumble badly every spring upon being liberated from the ground.

Some districts in England are only fenced round the pasture portions of the farms, for the range of the stock, leaving all the rest open to tillage. Other portions of the country have no fences at all, except for yards around the barns and sheds. The flocks and herds are kept as on the continent, by herdsmen and shepherds with their dogs; and the animals being brought up to this mode of pasturing, are not unruly at all, but gentle and tractable, and are easily retained within their limits with scarcely any trouble. When we first visited Europe fifteen years ago, we were convinced that this would be the best method to adopt in America. We have often wondered, that our intelligent and high-spirited countrymen would so long and so tamely submit to the intolerable burden of fencing against their neighbors' unruly cattle; and are satisfied, that if the subject could be placed before them in its true light, they would not be much longer. We know of no part of the United States which is unfenced, except a portion of the beautiful valley of the Connecticut; and if any one is desirous to see how easily this system can be carried into effect, and what an immense saving it proves to the landed interest of this section of the country, he would do well to make a visit there and judge for himself.

Another very pleasing feature in the fences of England, and which has been adopted to a greater or less extent in the older settled parts of the United States, are the rows of trees and belts of forest planted along their lines. The shade of these, in this cool, moist climate, does not seem to essentially injure the growth of the hedges, although beneath our more sunny sky, we are satisfied that they would. Rows and belts of shrubbery and trees along the margin of the road, and up and down the division fences of the estates, give England an appearance in the distance of being a well-wooded country; and in the early part of June, when the hawthorn is in full bloom, the fields look as if enclosed by walls of flowers. It is a charming country, made so principally by the hand of man, and with our decided rural predilections, we wandered over it with a pleasure we can not describe. Would that more of our countrymen engaged in farming operations could visit it; we are satisfied that they would generally return to their homes, determined to cultivate less land, and in better style, and do more to adorn its surface. There are many estates in Great Britain which art has made perfect pictures almost, and everything about them is disposed with as much taste as if they were destined to be immortalized on canvass by a Claude de Lorraine.

A RURAL WALK IN THE CITY.—No. I.

It is acknowledged, that New York is the fountain-head of America for literary, commercial, and political information, and the very best point for the publication of a leading journal on all these subjects; but when we started this paper, it was thought by many, that it was no place for issuing an Agricultural Periodical. We trust that something has been done by us the past year to prove the contrary, and we hope, ere this volume is brought to a close, all will agree, that we could not have chosen a point in the Union, combining so many advantages for the successful publication of an agricultural journal as New York. We would respectfully ask our readers, is any place in America so open to agricultural information, either at home or abroad, as this city? and where is the neighborhood abounding with such extensive green-houses, gardens, nurseries, orchards, and admirably-cultivated farms of every variety of soil? Nor is this vicinity so deficient in good stock as many imagine; indeed, few states in the Union can make as great a show of splendid improved animals, as may be found within a few hours' sail or ride of New York, and we trust, in the course of a few months, to make all these things somewhat more apparent to the public than they have hitherto been.



VIEW OF THE PARK, FOUNTAIN, AND CITY HALL, IN BROADWAY.—(FIG. 4.)

Of the many pretty rural spots in this city, such as the Battery, the Park, St. John's, Union, and Washington squares, enclosed by strong ornamental iron fences, and tastefully planted with trees, flowers, and shrubbery, we might dwell with much pleasure, and perhaps interest to such of our country readers as have never visited this populous place; but we at once pass over the subject, merely adverting to some new features recently introduced into these fine public grounds, and these are the fountains supplied from the Croton Aqueduct, and throwing up numerous columns of water in beautiful *jets d'eau* from 50 to 70 feet high, in every place appropriate to adorn them.

A profound writer on "The Age of Great Cities," says:—

> "If anything be certain, it would seem to be, that man is constituted to realize his destiny from his association with man, more than from any contact with places. The great agency in calling forth his capabilities, whether for good or evil, is that of his fellows. The picturesque, accordingly, may be with the country, but the intellectual, speaking generally, must be with the town. *Agriculture* may possess its *science*, and the farmer, as well as the landowner, may not be devoid of *intelligence*; but in such connexions, the science and intelligence, in common with the *nourishment of the soil*, must be derived, in the main, from the *studies proscecuted in cities*, and from the *wealth* realized in the *traffic of cities*. If pasturage is followed by tillage, and if tillage is made to partake of the nature of a study and a science, these signs of improvement are peculiar to lands in which cities make their appearance, and they *become progressive only as cities become opulent and powerful*."

How true this is in regard to agriculture in the neighborhood of the great city of London, containing upward of two millions of inhabitants, let any one who has visited inform our readers. The most able, and by far the greatest number of the agricultural periodicals in Great Britain are published in London. But to our point in hand.

Seed-store of Mr. George C. Thorburn, in John Street.—Taking Broadway for our line, about half a mile from the Battery, we diverge into John Street, and in the first square on the north side, we come to Mr. Thorburn's seed-store. It is a brick building four stories high, and the front of the first half is occupied by a large show-window, 14 feet in length, 10 feet high, and glazed with the finest French plate-glass, the two centre squares of which are each 5 feet by 4, and polished like the best mirrors. Here the choicest varieties of Camellia, Japonica, Heaths, Correas, Roses, &c., are constantly exhibited in flower, and occasionally some of the most beautiful exotics, such as Hybrid, Rhododendrons, Chorozemas, and other shrubs and plants, making a splendid show that is truly delightful even to the most hurried passers-by to pause and look at.

The interior of this store is quite spacious. It is 130 feet deep, the whole of which is thrown into one room. The walls are covered with pictures on one side, interspersed with garden and nursery implements tastefully displayed, while the other side is fitted up with numerous seed-drawers and shelves, filled with porcelain flower-pots, vases, and glass globes with water in them, and gold and silver fish playing about, while on each side, resting upon the floor, are long rows of bins, filled with all sorts of peas, beans, grain, and roots.

Up stairs is a spacious picture gallery, containing a select collection of fine paintings and engravings of plants and flowers, of some of the most interesting subjects of English and American history. Here also is quite an aviary of Canary and Mocking birds, enlivening the room from morning to night with their cheerful melodious tones. How often, when tired of the counting-room, in former years in this city, have we come here, before the establishment was half its present size, and stood back from the street with its pretty front yard, to enjoy a sight of the plants and flowers, and listen to the sweet song of the birds. Altogether, we suspect that this is the largest, most varied, and showy seed establishment in the United States, and it is well worth visiting by all strangers coming to the city.

Seed-store and Green-house of Mr. Smith, 385 Broadway.—From Mr. Thorburn's we return again to Broadway, and what a change from the quiet John Street. One is half stunned with the clatter of iron shod-hoofs, and the rumble of carts, omnibusses, and carriages; and along the spacious foot-walks is a crowd of pedestrians, and among them are flowers of a different order than those we left at Mr. Thorburn's; but of these it does not become us to speak, as they do not happen to be in our line: so, fair ladies, in gay bonnets and plumes, and dazzling dresses, and looking as smiling and rosy as you please, in gay groups, pass on.

Though not as large as Mr. Thorburn's, Mr. Smith has an excellent establishment. He makes all his own importations, and is as careful as possible in their quality as well as those raised for him at home. Such as we inspected we found good, and were especially pleased with the samples of Imperial oats which he showed us. They weigh from 43 to 46 pounds to the bushel, have a thin light husk, and seemed to contain a great amount of farina. These oats were originally imported four years since, and are now well acclimated—the price is $1.50 per bushel. Mr. Smith has a pretty green-house in the rear of his store, where he keeps the usual variety of plants and flowers for sale; he has also extensive ranges of glass out of town, for the purpose of propagating and supplying the city establishment.

As we passed into the green-house at the left, occupying a large niche to itself, we observed a very splendid specimen of the Rhododendron Altaclarensis in full bloom. It is a magnificent shrub really, and well deserves the attention of florists, and the high favor in which it stands with the amateurs of flowers.

Seed-store and Conservatory of Mr. Dunlap.—Keeping up the east side of Broadway till we reach No. 576, we come to Mr. Dunlap's, and we had no idea of the extent of this establishment, till we walked in, and thoroughly examined it. The seed-store is 22 feet square or so, and the conservatory immediately joining it, is the most splendid affair we have seen in the United States. The grand range is 2 feet wide, 15 feet high, and 200 feet long; then there are side ranges in addition of nearly 100 feet more. In the centre of the long range is a walk 6 feet wide, laid down in wood, and painted in diamonds. On each side of this is a deep green moss edging, and over these are pretty ornamental stands of various fashions for flowers, and on either hand of the long aisle, stands a thick wall of dense foliage and flowers of Oranges, Lemons, Pittosporums, India-Rubber trees, Acacias, Eugenias, Oleanders, Sparrmanius, Palins, Magnolias, and Rhododendrons, thickly spreading out, and averaging a height of 12 to 15 feet. Aside from these there is a great variety of rare and curious plants, and as one example of the number displayed here, the proprietor stated that there were upward of 2,000 Camellias alone. We found here the *Cycas Revolutum* or Large Palm, standing some 8 feet high, with its Corinthian-like crown, containing hundreds of seeds, and contrasting superbly with its feathery green leaves, full 3 feet in length. This is a great curiosity, and is much admired. We also saw several of the *Agave Americana* or Century Aloe. One is said to be the largest in the United States. It is twice the size of that of the Patroon which was in flower at Albany last fall, and occupies an entire house by itself, 15 feet square.

Mr. Dunlap heats his conservatory with hot water, which is carried through its whole length in double rows of iron pipes. We found, when in England, that steam or hot water used exclusively in heating conservatories, was objected to, as causing the air in them to become too damp; but in our drier climate we are informed that they are not injurious, except perhaps in extreme cases, which of course must be guarded against and obviated. Overhead in the conservatory is a line of cages for singing birds, and at the further end is a large circular stone basin of water, with gold fish playing their gambols in its depths.

Having exercised our feet pretty satisfactorily, we now crossed over for a call on our friend, Dr. Field, in the Third Avenue, who, being quite an amateur farmer, and hearing of our projected walk, determined it should be changed to a ride, and immediately ordered his gig-horse out for the purpose of accompanying us on the remainder of our excursion. And here we found a capital specimen of the well-bred and well-broke New York trotter in the Doctor's horse; for he is gentle, playful, and spirited; will stand anywhere in the noisy streets of the city without hitching, and is equal at all times on the road to a mile in four minutes, and would probably, with a little training, accomplish it with ease in three.

Mr. Emmet's Durhams.—We trust that we shall be pardoned in giving a brief notice of a call at the tasteful private residence of one of our most estimable citizens, Thomas Addis Emmet, Esq.; for in more ways than one, he has made himself a part of our public property. But we will not dwell upon this subject. The residence is prettily situated near 57th Street, and commands a fine view of the East river and the adjoining country; and with its ample garden and ornamental grounds, embraces about 20 acres, making quite a city farm. Of course one can not expect to find here a herd of Short-horns, that will count in number with those of a Kentucky planter, but what few there are, we found in fine order, and bred as a matter of taste and fancy by Mr. Emmet himself. His cow Celeste is a fine specimen in form of the Durham, and one of the most famous milkers in the country. Pasturing on a meadow just below the house, and without other food than the grass she obtained there, she gave for some time last summer, from 29 to 33 quarts of milk per day of an excellent quality, and was now giving 8 quarts a day, though several months gone with calf.

Ever-bearing Raspberry.—The conservatory was well stocked with plants in full bloom, but the season is so cold and backward this year, that vegetation can scarcely be said to have begun, and of course we could find little attraction at this moment in the grounds and garden. Our attention, however, was called to a variety of the Ever-bearing raspberry, very different in appearance from that of Ohio, described on page 5 of Vol. I. of the Agriculturist. Its branches are smaller, and it is destitute of the prongs at the end of them, necessary for self-propagation. Its fruit also is different, Mr. Emmet informing us that it more resembled the purple Antwerp than any other variety which he cultivates. It usually ripens about the 15th of July, and continues bearing till cut off by the frost. It was originally procured by his father, the late distinguished Robert Emmet, Esq., from the Botanic Garden of Dr. Hosack; beyond this Mr. E. could not trace it. Any one desirous of obtaining this variety of the raspberry will be freely furnished with cuttings.

Anthracite-Coal Ashes.—It will be seen that we were correct in our opinions of the supposed value of these ashes for manure, by a quotation in our February No., which we gave of an experiment made with them by the Editor of the American Farmer. Mr. Emmet has made use of them for eight years as manure, and finds them beneficial; especially in assisting to lighten a heavy soil, and render it more friable and easy to work.

TO OUR READERS.

We trust when you have got to the end of this Number, that you will be satisfied that we have given all the improvements promised in our last; and if you will only encourage us in our good work, we shall continue to go on and add others as it will afford, for it is our intention to make this indisputably the leading Agricultural paper of America. The price at which we offer this periodical is within the means of every person, and we shall look for a large and steady increase to our subscription list. We shall send this number to all the subscribers of Volume I., and we hope that they will take pains to show it to their friends and solicit subscriptions. No subsequent numbers will be sent till the money is remitted in full for the Second Volume, for we can not deviate from our terms.

At our present terms, Three copies for Two Dollars, or Eight copies for Five Dollars, the American Agriculturist is among the very cheapest books of the day; and what is more, we can add with a clear conscience, and without a single spark of vanity, we think it one of the *most entertaining* and *instructive*. Our Correspondence now is rich, varied, and extensive; and will be enlarged still further, more especially in Europe; then we are regularly in receipt of all the Agricultural journals of any value, both at home and abroad, besides everything in the way of books as fast as they appear. These advantages, combined with those of our central and commanding situation, will enable us to keep our readers promptly and fully acquainted with everything of interest upon this great and all-absorbing subject.

SUGAR-BEET.—We have to apologise to our readers for the non-appearance of the article on the Cultivation of the Sugar-Beet. It is in type, but could not be got in for want of room. We might have easily filled two numbers of our paper with editorial and other matter at present in hand.

FAST TROTTING-HORSES.—We have just received several orders for fast-trotting horses, either matched or single. Those who have them for sale, will please address us post-paid immediately, stating price and all particulars regarding them, as we wish to fill the orders without delay.

The following was received by mail, two days too late for insertion in our last, for which it was designed.

The undersigned, having been unavoidably detained in Buffalo since issuing the December number of this paper, and having pressing claims upon his attention, which will probably continue to detain him there, reluctantly withdraws from the responsibility of editorial duties, to which he is unable personally to attend. He can not but hope, however, that an intelligent public may continue to sustain not only this, but all well-conducted agricultural papers. They owe this to themselves, to their children, their country, and the human race.

It is estimated that there are now published in the United States, 135 daily, 1140 weekly, 125 semiweekly papers, 205 monthly, and other periodicals of a general character, not one of which makes agriculture the leading object of its attention; while the number of such as are exclusively devoted to this subject, does not exceed 25, most of which are monthly, are issued at a low price, and enjoy for the most part, but a very small circulation. When to this limited range of agricultural periodicals, we add the consideration, that they relate to the sole occupation of three fourths of the productive population of this country, which contributes at least an equal proportion to our aggregate national resources, it may well be thought singular, that a majority of our citizens are so utterly neglectful, not only of their individual interests, but of those also which so materially affect the whole community.

It was with these views of the vast importance of the subject, and the too general indifference to its great principles, and more improved and scientific management, that induced the undersigned for a time to lend his feeble aid to the great cause of agricultural advancement in the United States. No circumstances or observations since made, have produced any alteration in his views; and it is a source of gratification to be assured, that while some may find it necessary to quit the field, others are pressing into it, with the full determination not only to sustain, but carry this great movement onward. May its progress be such, as its intrinsic merits and paramount utility demand.

Although unable to devote that attention to the paper he has heretofore done, the undersigned yet hopes occasionally to meet the instructive correspondents of the American Agriculturist in its columns, on common ground, to interchange such views and sentiments, as may tend to mutual interest and instruction. RICHARD L. ALLEN.

Buffalo, Feb. 15, 1843.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

SHEEP HUSBANDRY.—No. 2.

Where is the best sheep country?—In my last communication, I alluded to the national character of your publication, as being one of its distinguishing merits. It has, to me, another very attractive recommendation, its promise of becoming the leading work of the United States on the subject of *stock*. I do not mean *bank* or *rail-road* stock, but a kind which is far more interesting and profitable to farmers—*live* stock. If you do not make it the best periodical on that subject in the whole world, it will be *your own fault*.

Now for the promised topics, "the *best kind of sheep*," and "the *region of country best adapted for them*," within the limits of the United States.

First, for the district of country naturally best adapted for *profitable* sheep farming—*where is it?* And on this point I would myself be an inquirer. Surely some of your many intelligent friends and correspondents in every section of our wide country, can afford us *light* on this important subject. In my former contribution to your columns, I threw out the suggestion that it was somewhere *out* of New England; and, if we may trust an opinion from a distinguished source, it is not in Vermont, that region which was formerly regarded as being, *par excellence*, the *best* sheep district of the whole United States. It is, no doubt, a pretty good sheep country, as is proved by the *fact* of wool-growing having been extensively successful and profitable there; that state having sometimes produced about ten per cent. of the whole quantity raised in the United States. But hear what the Governor of Vermont says, in his recent Message to the Legislature of that state: "The rich and almost boundless plains of the great west are becoming covered with flocks of sheep, which will soon furnish supplies of wool, in such abundance, as I fear, may seriously affect the sale of our own." This does not look as if Vermont, or New England, or even the old northern states were the *only* or the best sheep country. The Governor of Vermont is, without doubt, correct in his anticipations, that the prairies of the west will, ere long, produce a great quantity of wool. They can, no doubt, raise it at less cost than in the old northern states, and of *quite* as good quality; while, on so valuable an article as wool, their distance from market, and the cost of transportation, is an item of but small relative consequence. But, so far as I can learn, they will, at the west, throughout all the prairie country, have to incur the expense and trouble of feeding their flocks for about *five months* of every year. This is almost as bad as in New England, where it is the great bane of profit, and the most serious obstacle to success in that pursuit. I have long fancied that there must be, somewhere within the United States, a region, where, while it is cool enough in summer to be a *grass-growing* country, the *winters* are so *short* and *mild*, that sheep would not require much if any feeding, at all events not for any great length of time. If there is such a region, that is the country for *sheep*, and *there* is the place where *wool* can be grown *at least cost*, especially if land is cheap. If the country is hilly or mountainous, so much the better; or if dry, sandy or rocky, none the worse. Only, not let it be sunken and wet land, for such will not answer for sheep pasturage, though it may do better for horned cattle than for sheep.

Where is such a country as I have described? I ask for information, and hope to receive it ere long through your columns. Will not some of your readers at the south and southwest inform us? In so doing they might be also "doing their country some service." We know that fine wooled sheep will thrive and do well in the southern parts of Pennsylvania and Ohio, and in the hilly and mountainous parts of Maryland and Virginia, and also in Kentucky and Tennessee, and in the upper parts of the Carolinas and Georgia. In the upper part of the *latter* state, which is a grass-growing country, though perhaps at present almost too new, I should not be surprised if the "Eldorado" of *wool* as well as of *gold*, the "Elysian Fields" of sheep, should ultimately be found. The "prairie country" of the west, will, for a time, have one very important advantage, which is, that land is not only cheap, but they do not have to incur the expense of *clearing* it, which, in some heavily-timbered districts of country is a great tax. There is one view of the subject of sheep-farming, which is consolatory and encouraging to the wool-growers of the older states. It is, that where the climate compels them to feed their sheep through a long winter, they save by that means the manure, no trifling consideration, as, if well husbanded and applied, their next season's crops will testify; and, in addition, the manure so saved will be far more valuable in the old states, where it is needed, and where the *crops* it produces will *always* be worth the most money.

But I have already consumed as much of your space as is allowable for one time, and I must consequently defer to another opportunity, the promised discussion as to the *best and most profitable* kind of sheep, which topic will of itself furnish abundance of interesting matter for my next epistle. Till then adieu.

Americus.

March, 1843.

For the American Agriculturist.

CITY MANURES.

In my two former articles, I gave our farmers an account of eight fertilizing materials thrown away in the cities of New-York and Brooklyn. I shall now proceed to point out others equally valuable to the agriculturist; and shall first bring to their notice, the broken glass of our cities, heretofore carted away to fill up our docks.

Glass is a silicate of potash or soda, which enters into the composition of all grasses, straw, grain. and corn, forming a fraction of the solid portion of probably all vegetation. Silicate of potash and of soda, is silicious sand chemically combined with those alkalies; that is, such sand as is commonly found on our sea beach. Wheat contains a larger portion of silicate than any other grain; and if sown on land totally exhausted of this material, no wheat will be produced, however rich the soil may be in other fertilizers. When sown on land mostly exhausted of silicate, the crop will be small and the grain light in weight.

To apply glass to land, it should be ground as fine as flour. I have sold about twenty-five barrels of it to our farmers within the last six months, and the coming crops will test its value. The price charged has been $1 75 per barrel, the barrel included; and when our farmers know that each barrel contains more than three hundred pounds, and that in this quantity there are from one hundred and five, to one hundred and twenty pounds of potash or soda, they will know it to be one of the cheapest fertilizers they can purchase, independent of any effect from the silex dissolved in it. It is purchasing pure potash or soda at less than one and three quarters cents per pound. I should consider one barrel per acre to be an ample supply for two years' crops.

Many hundreds of tons of broken glass are thrown away in New-York and Brooklyn annually; and as every hundred tons contain from thirty-five to forty tons of alkali, our Long Island and Jersey farmers may judge how much they lose by not employing it on their land.

I shall now call your attention to the Plaster of Paris thrown away in New-York. Such an assertion will no doubt surprise many a farmer who uses plaster; yet it is true that scores of tons of the purest of plaster have been annually thrown away in our city. I last summer had carted away twenty-one barrels of it to put into a compost heap at Gravesend. In making soda water they use carbonate of lime, from which they separate the carbonic gas to saturate the water contained in their fountains. To do this, they have to use sulphuric acid; this combines with the lime, separating it from, and liberating its carbonic gas, and the residuum thrown away is the purest of plaster. Such plaster will be moist, yet sufficiently solid to cart away in flour barrels. Let those farmers who find plaster beneficial to their land, attend to this source of supply.

I shall now call your attention to the dock-mud taken out of our docks by dredging machines. I was quite astonished the other day to learn that this material was landed in scows, then warped to the tide current, and *there thrown into the river!* This is probably one of the most valuable fertilizers we have in the country, and the quantity is immense. It contains the whole wash of the city; and after a rain-storm, the most valuable portion of our street dirt settles in the docks. Chamberlie, soap-suds, soap-lees, fish-offal, blood, pot-liquor, &c., &c., are the greater portion of them collected in the dock-mud. The very smell from the docks when foul, or the tide is low, is a pungent proof of its fertilizing power.

This material should be collected in some convenient spot where it can be landed, put into heaps under open sheds, mixed with lime, plaster, or charcoal, and let lie until a thorough decomposition takes place, and then applied to the land. There can be no doubt that one cart load from such a compost heap, would be more valuable to the farmer than three loads of the best street dirt.

It has been objected by some that dock-mud contains salt. This, instead of being an objection, will be found to be one of its most valuable properties. The celebrated guano-manure, taken to Europe from islands in the Pacific ocean, and selling there at $2 33 per 112lbs., contains more than thirty per cent. of sea salt, a larger portion probably than would be found in our dock-mud. I should consider that a compost made from our dock-mud would be very little, if any, inferior to the guana-manure.

Wm. Partridge.

PROTECTION TO WOOL.

As the subject of the necessity of further protection on wool, is at present occupying the attention of the public mind, in particular accordance with the advice of some of our friends in town, we give extracts from two letters received three months since, and have spent some time in again investigating the wool business here. It will be seen, that we can add but little to what we said in our January Number. But here is the substance of the whole matter, so far as we can learn.

1st. None but the very coarsest wools, such as we do not grow now in this country, can be imported at present prices without a loss.

2d. No wool can be brought here from abroad, that would have the smallest chance of competition with Mr. Grove's, Saxons, for example, or Mr. Collins's, Rambouillets.

3d. The fine Australia merino, which it was feared would be so great a competitor to our own merino, can not be afforded here at less than 45 to 50 cents per pound, and it is bringing more than that now in England; and it will consequently all go there hereafter.

4th. The fine Mateza wool of South America makes good satinets, and is about equal to our half-blood merino, and will therefore compete with it in being manufactured into this article; but in consequence of having so many burs, it can not be stapled, and enter into competition with our middle wools and the manufacture of broadcloths and cassimeres. It is sold from 6 to 12 cents per pound, in this city, according to quality, and the amount of dirt and burs in it. Yet notwithstanding this low price, when it comes to be made as clean as well-washed half-blood merino, it loses so much, that it will cost the purchaser at least 26 cents per pound, and is therefore only a fair competitor in our market.

Now under these circumstances, we think our wool-growers should be satisfied with present protection, and bend their exertions to *improve* their flocks, and to the production of a better quality of wool; if they will do this, they can undersell any foreign importation, and be doing a good business. We have as fine a country as there is on earth for growing wool; and it will be our own fault entirely, if we are driven from the home market, or indeed if we ever allow a successful competition with the foreigner.

Cleveland, Ohio, Dec., 1842.

MR. A. B. ALLEN: When the Tariff Bill was passed in August last, many of our farmers exulted, and said that they should be able now to add one more article to the number of their products that they could turn off for cash, viz., wool. But a few of the more intelligent and reading ones begin to suspect all is not right; that the wool-grower is *not protected*, but the *woollen manufacturer*.

It is becoming a matter of serious discussion among the farmers in this quarter, whether under the present Tariff, wool can be successfully grown. It certainly seems to us, from some communications which appear in the eastern papers, that it can not be safe for western farmers to invest in sheep, and make wool a staple of their farms, under the existing duties on wool; and I refer you to the enclosed No. of the N. Y. Evening Post on the subject. If the wools imported are of the character represented, and cost less than 8 cents, paying consequently no duty, why we shall find the enterprising Yankees in South America, with their vast flocks of Saxony and Merinoes (climate, pasturage, and labor, all being extremely favorable to the growth of wool there), as we already find them in the West Indies growing silk.

I have lately been inquired of by several large farmers, whether these statements are true? Being unable to give any answer, I have concluded to ask you to take the subject up, and give to the public all the information in relation to it, that the subject will admit of; for it is certain that the truth ought to be widely disseminated among our farmers. Situated as you are at the head of American commerce, you can collect, through the importers and manufacturers, all the facts as to cost, freight, expenses of cleaning, and the different qualities of the imported wools, and the kind of cloths manufactured from them. If my memory is correct, you and your friends have heretofore been engaged in the importing of wools from South America and Russia.

C. M. GIDINGS.

Dear Sir: In speaking of sheep here on the western prairies, you say: "I think a great deal of that business; and my opinion is, that fine Merino wool may be grown there [meaning on the prairies of the west] for 20 cents a pound, at a fair profit; and if it can, it will soon be hardly second to cotton in our national products, and we shall become large exporters, instead of importing as we now do." Yes we do, much to our shame as a nation, —we do import wool, and more to the shame of the framers of the late tariff, that no protection is afforded to the wool-growers, until they get so into the business, that they will neither need nor ask protection. A shame it is that we import wool, while we have millions of acres of the finest sheep pasture in the known world, annually giving their rich foliage to feed the prairie fires, instead of fattening millions of sheep.

Well, sir, *wool can be raised at a fair profit at 20 cents* a pound, delivered in New-York, or Boston. But at present, the west is not able to go ahead; for the sheep are not here, and the capital is not here. We want eastern capital and eastern sheep. Just give us the necessary material, and I pledge my reputation that wool can be grown in untold quantities upon the western prairies, at 20 cents a pound; and with this price, the sheep-owners will grow rich faster than at any other agricultural pursuit in the Union.

And it does not require a long preparation before the business can be begun. The land is now ready, both pasturage and mowing; and I say to eastern men, come to the West with your sheep. You can not raise wool upon your high-priced land at 20 cents a pound, for fine qualities; but we can. There is another disposition that may be made of the surplus sheep of the eastern states. Thousands of them might now be let to responsible men to double in three years; or for such a portion of the annual crop of wool, as would amount to a great interest on the value of the sheep.

Only let us have the sheep on the prairies, and I assure you that the west will soon show the world another wonder, that will send somebody's "wits a woolgathering."

AN ILLINOIS FARMER.

A. B. ALLEN, Esq.

From a letter recently received from Judge Beatty of Kentucky, we extract the following:

I planted my hemp-seed last season somewhat closer than recommended in my essay, to wit, 4 feet each way, and left *three* stalks in a hill, cutting out all the blossom-hemp within a week after it began to appear. The blossom-hemp, which *afterward* bloomed, furnished sufficient pollen to impregnate the female plants. These male plants were suffered to stand till they had pretty well shed their pollen, and were then cut out. There were now left in each hill, from one to two stalks of seed-hemp, averaging about one and a half. The yield was about 40 bushels to the acre. The season quite a favorable one.

I have not any information respecting the rotting of hemp by steam, that would be useful to you. The effort made at Newport has proved a failure, but whether from the plan being intrinsically defective, or for other causes, I can not say; I incline to think, however, that this plan will be no improvement upon the old method.

CHEAP BEEF AND TALLOW AGAIN.

WE received a letter from Mr. Robinson, of Lake Court House, Indiana, in reply to our comments in February number, upon the production of cheap beef and tallow at the west, which has unfortunately got mislaid; and lest it may not turn up again, we make haste to state the gist of it, which we think we can pretty fairly do, from memory. It was not the great weight of the cow of which Mr. Robinson thought so much, but the large quantity of tallow which she produced for her carcase; and being pure grass-fed, and that upon land, which, as it is owned by Government, any one can have the free use of—the beef and tallow would consequently cost a mere nominal price, and thus give him the advantage of the argument in point of cheapness, to which, of course, we readily accede.

From a private letter from Mr. Robinson of 8th of March, we extract one paragraph.

Your description of the English mode of stacking grain, I have never before seen in an American paper. We are too unwilling to copy good methods of farming, because they are English. If this plan of stacking was universally adopted in this country, it would save great expense in barn building, and tens of thousands of bushels of grain every year.

For the American Agriculturist.

CULTIVATION OF FRUIT TREES.

When the large profits attending the cultivation of the finer fruits in the neighborhood of a market, and the great addition to the food, comfort, and luxury, they afford everywhere is considered, it is a matter of surprise they are not objects of universal attention. I have had cognizance of the New-York markets for the last 15 years, and during this time they have borne the highest remunerating prices, yielding a far greater return to the farmer than any other crops he can raise. Early strawberries, early apples, and choice varieties of apricots, cherries, peaches, pears, plums, and grapes, have returned, it is believed, fourfold the profit of ordinary farm or horticultural products. Even during the last season, while good mess pork was selling here for $7 to $8 a barrel, the best peaches, plums, and pears, brought twice that amount, and frequently more! The Bergamot, Bon-Chretien, Seckel, Virgalieu, and other choice pears being frequently worth $6 a bushel, while choice peaches would readily bring $5, and other kinds of rare fruits were equally high. Now in this calculating and all-absorbing money age, what prevents the supply of larger amounts of these delicious products? We can conceive but of two or three reasons which appear to us to cover the whole ground.

1st. The object is too remote; it requires from 3 to 6 or 8 years to obtain a full return for the time and money expended. True, but if your land is for sale any time previous, it will bring several times the additional cost of this outlay, more than it would otherwise do, and when once it begins to pay, it will be a continued source of profit, with comparatively trifling expense thereafter.

2d. The fruit does not thrive as certainly and rapidly as expected, owing to bad trees, or bad soil, or bad management, and the owner is discouraged from further attempts; or the trees become diseased, and he is too ignorant or shiftless to ascertain the cause and apply the remedy.

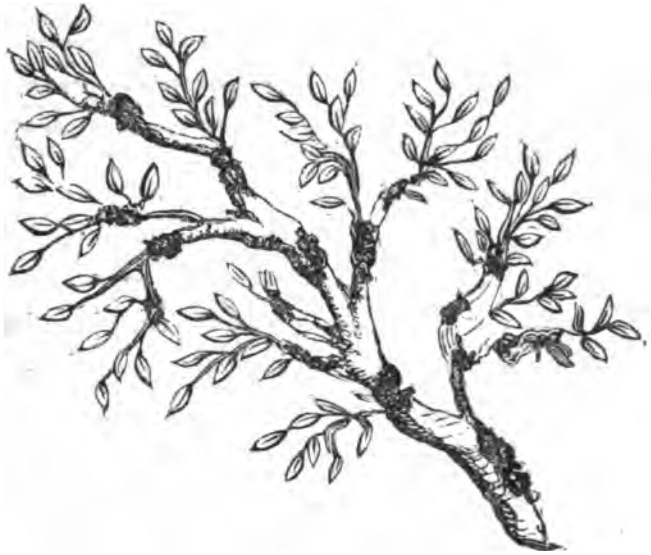
3d. He does not make it his business, and considering it but of secondary consequence, his trees are neglected, and soon fall into decay. But we have already stated sufficient inducements for him to make it his business, and justify any one who is near a good market in producing the best qualities of fruits in abundance, and when not able to sell at large prices, the farmer cannot procure food, medicine, or luxuries cheaper, and good fruit is cash, than by cultivating an adequate supply for the wants of his own family. I shall confine myself in what I have to say at this time, to a few simple directions as to the choice of soil, mode of treatment, and remedies for diseases.

The soil should be sufficiently dry and in good condition. It is a mistaken idea that very light or sandy soil is requisite to produce good fruits. A strong calcareous clay soil will yield as abundantly, and perhaps a higher flavored fruit than a lighter soil. But any land in condition to yield the greatest quantity of good wheat, may be safely taken as of standard quality for the different varieties of fruits.

The aspect of the land, if there be an opportunity for selection, should be northward or westward, so as to avoid the injurious effect of premature development of vegetation in the spring, by which the fruit is effectually cut off by late frosts.

The transplanting should be managed with great care. If a strong clay soil is used, the ground should first be turned over by a heavy plough, with a double furrow occupying the line of the rows, by which not only is the ground raised higher and an opportunity afforded for the water to pass off in the plough drain between the two lands, but there is more soil thrown just where the trees require it for their own support. When not convenient to do this, and the land is not underdrained, I have found it most effectual for the rapid growth of the tree, to place the root on the upturned surface of the ground, by which they are free from the drowning effects of standing water in the spring, or excessive rains in any other portion of the year.

The distance at which the trees should stand apart, must depend not only on the species of tree, an apple requiring at least four times the space of a peach, and sometimes much more, but also on the variety, twice as much room being necessary for the Baldwin or Seeknofurther, which is adequate to the full development of the Siberian crab. The holes dug to receive the roots should not be less than 4 feet square, whether the roots are half this size or less; the object being to prepare a rich mellow bed for them to develop in. The earth should be carefully trod around them when put in, and water added to settle the fine earth around the roots, will do much toward preventing them from dying. Strong manure is not suited to the young tree. Muck from swamps or the woods, chip manure, or a mild, well-tempered compost, is proper to commence with, and ashes and lime may be added afterward as the tree matures. Great care should be used in selecting such as are healthy and of rapid growth, and they should never be subjected, from the want of proper care, to become stunted or diseased. By careful attention, a growth and maturity may be secured for them in 5 or 6 years, they would not otherwise acquire in 10, or perhaps never.



BLACK BUNCH IN PLUM TREES.—(FIG. 5.)

To illustrate the text of our correspondent in what follows on the diseases of fruit trees, we give above a cut of a diseased branch of a plum tree, frequently called the "*black bunch*," but which we understand him as defining, "the *knots or black warts*." We are indebted to the courtesy of Messrs. Nafis and Cornish 278 Pearl St., publishers of PRIME FACTS FOR THE FARMER, for the figure, a little work we highly commend to our readers.

Diseases.—The *fire-blight* in the pear, is probably owing to an insect, and the proper remedy is excision of the limb; *cut off and trim it as fast as it appears.* The same remedy applies to the *knots* or *black warts* in plums, and the *black gum* in cherries, they being caused by the boring of an insect, and nothing but burning affords any safety to the progress of the disease. If one or more trees or even a whole orchard is deeply affected, cut it down, and set out another on a different field. The *curculio* is propagated by the deposite of the egg in the unripe fruit, which, in consequence, falls prematurely from the tree. Swine at large under the tree, will destroy the future enemy by eating the fruit. If the situation of the trees permits their access, the premature fruit as it falls should be carefully collected and fed to them, cooking first when practicable.

Much injury is done to fruit trees by trimming at a wrong season of the year; but those desirous of information on this subject, will find it in the 3d No. of Vol. I. of the American Agriculturist.

The peach is subject to two injuries, the *borer* and *the yellows.* The first, ægeria exitiosa, lays its eggs in the body of the tree at the surface of the ground. They eat the bark, and in time destroy the tree. They are indicated by gum oozing from the wound, just underneath the ground. To destroy them, the earth must be removed from around the trunk 3 or 4 inches deep in the spring, and dig out and exterminate every insect from the body of the tree. *The yellows* is indicated by a yellowish color in the leaves of the trees, dwindled shoots, with stinted leaves and premature fruits of a miserable appearance and quality. This disease is slowly propagated by contagion; and as there is no cure for one thoroughly infected, the only safety is to exterminate any diseased tree as soon as discovered. The life and product of the peach is augmented by trimming off the outer branches of the tree, one to two feet, in July. This practice keeps the tree healthy, and the limbs full of bearing buds.

What are the causes of failure in fruit trees at the present day.—I recollect orchards, some 25 years since, which had been planted 30 years before, on the virgin mountain land of New-England, that bore as great a variety of large, fine-flavored fruit as I ever saw. I visited the same farm a year or two since, and found all the choice varieties either entirely gone, or so far past their vigor, as to yield but moderate supplies of diseased fruit. Other trees which had been set out to take the place of such as had died, were of small growth, and produced indifferent fruit. What were the causes of this difference? I conceive them to be mainly two: 1st, disease and enemies unexterminated; and 2d, the absence of some principle of fertility, originally in the soil, but now exhausted. Close observation will detect the former, and apply the remedy; scientific research will ascertain the latter, and prescribe the addition required. Like the deficiencies for wheat where it was once yielded in great abundance, we believe fruits may most effectually be produced by adding ashes and lime to a soil already in good heart. A moderate quantum of observation, intelligence, industry, and good sense, will enable any farmer to supply himself in abundance with these essential accompaniments of every good farm. R. L. A.

Buffalo, March, 1843.

From a letter of Thomas Affleck, Esq., dated Ingleside, Miss., 15 Feb., 1843, we make some extracts. The specimens of lime and marl have not yet come to hand; but as soon as received, we shall see them properly analyzed.

Cotton Seed for Cows.—I am now feeding to my cows, boiled cotton seed, with a little chopped corn added. It gives the butter a rich flavor and fine yellow color, and I may safely say, doubles the quantity. The cotton seed must be *well-cooked* though, which a few minutes boiling will do.

Value of grade Durhams.—I could show you about as pretty a herd of cows as you would desire to look at, that I found here on one of our places. They were the produce of the common Spanish cows of the country, by a $\frac{7}{8}$ or $\frac{15}{16}$ Durham bull, which was brought there some years ago, and lived only a few months, leaving these animals. They are all good milkers, giving now an average of 8 quarts a day, and suckling their calves. They are compact, well-made, handsome animals; large for their height, and heavy; and all either red and white, or a sort of brick-colored brindle. This year they are bred to Coronet; and I shall show some of them at our April fair, as proofs of what a *single* dip of Durham blood will do, although not quite a full dip.

Cultivation of the Turnep.—These are usually sowed here in August and September, on ground enriched by penning the cows and other stock upon it some time previously, or what is still better, on a piece of newly cleared land. But I prefer to them, for cows, *raw* sweet potatoes and cooked cotton seed.

Lime and Marl.—At the Cold-Spring plantation, I have found a thick stratum of limestone, with a 20-inch layer of rich marl over it, and think it better than a silver mine. I shall apply a good coat of marl to a few acres of this land, that I am putting in oats this spring; and as soon as I can prepare it, I will have a kiln for burning lime. I send you specimens of this lime and marl. Will you do me the favor to give me an analysis? No. 1 seems to contain the greatest portion of carbonate of lime. No. 2 is a part of a stratum running beneath the lime, and is I know not what. No. 3 is marl, and if I am not greatly mistaken, is a rich specimen.

For the American Agriculturist.

A MARYLAND FARM.

Agricultural Capital.—I have frequently, in reading over the foreign agricultural journals, been astonished at the lavish expenditure of capital on the landed estates in England, to promote their fertility, reclaim them from waste, or bring hitherto worthless tracts under cultivation, wall them in from the sea, and otherwise render them more productive; but on further examination my wonder has ceased, when I learn that in almost all cases of such improvement, the capital thus expended has produced a liberal additional interest on its investment. Probably no department of British industry receives so liberal an outlay of capital as that of its agriculture, affording in this particular a marked contrast to our American agriculture, which scarcely anywhere receives, and even then grudgingly, but an investment of moneyed capital sufficient to render our lands habitable, by a large proprietor. How often do we see proprietors with large landed estates lying in a ruinous, dilapidated condition, with but a few meager acres carelessly cultivated, around their dwellings, which last appendage may be even elegant and costly, while they have their tens of thousands invested in some bank, or insurance company, or in bonds and mortgages, which, if withdrawn, and intelligently invested in the improvement of their estates; what noble revenues, as well as delightful employments would result from it, instead, as is often the case, of wasted fortunes from the insolvency of their debtors, and of personal ruin to many a worthy and, under different circumstances, promising young man, resulting from idleness and dissipation, arising simply from want of employment!

Yet, with all our experience in these matters, hardly an individual can, at this time, make an investment of capital in agriculture, but, ten to one, he will be looked at with suspicion by his monied friends and associates, and either his judgment or his credit, according to his expenditure, is at once suspected. This we know to be all wrong, and the result of a perverted and false estimate of the true value of agriculture, and its safety, and sure reliance for support, in all times and seasons, and the steady virtue and integrity of those who rely upon its bounties. How many, and many young men have I known, sons of rich pains-taking fathers, who, indulged in habits of ease or of loose attention to business while boys, yet with sanguine expectations hereafter, on attaining their majority had been placed in business with a handsome capital, and in two, three, or five years, as the case may be, had lost every farthing, and thousands besides, the property of others who had confidingly trusted to their good management! Yet if these fond fathers had invested the same sums in good farms or plantations, and given their sons a plain agricultural education, ten to one they would have proved prudent, useful, thriving citizens, and good, contented, and happy farmers, instead of, at an early age, broken down, disappointed, and unhappy men. And all this from a false, imperfect estimate of the agricultural profession, and its dignified and sturdy resources.

A Maryland Farm.—But to the main subject of my letter, instead of a homily on false principles and habits. In a brief journey to the seat of Government, last June, when arrived at Baltimore, I made a diversion from my route, to visit a gentleman located near the Ohio railroad, about thirty miles west of the city, and to view his fine estate, and see his herd of beautiful Devon cattle, for the care of which he has long been celebrated. I found him on his farm of some seventeen or eighteen hundred acres of fine rolling land, a garden amidst a poorly cultivated yet pleasant country, years ago worn down by hard cropping of corn, wheat, and tobacco, but of good natural soil and capabilities. Here, retired upon his estate, with a plain yet beautifully-situated dwelling and outbuildings, and all the necessary appliances for a gentleman of wealth, education, and leisure, he has for many years lived and improved his estate, until it has become one of the most valuable in the country; and from a condition which, when he first began its cultivation, was sterile, worn out, and almost worthless. I spent a day in rambling with him over his fine domain, and never have I been more pleased and instructed. As this is a full and successful illustration of what may be done in almost all our Atlantic states, in the improvement of worn-down soils, I trust I shall be excused for giving it somewhat in detail. When the proprietor first located on his farm it was entirely unproductive; yielding no crops, giving no manures, and possessing no resources of fertility, other than the muck or swamp-holes, occasionally interspersed among the woods and waste lands of the estate. After thoroughly examining the soil, which was found to be of various kinds, but chiefly a loose friable earth, based on a clay bottom, with occasional tracts of stiff clay on the surface, he purchased a limestone quarry a dozen miles distance on the railroad, erected two large kilns at the depot near his estate, and went vigorously to work in getting out the stone, roading it to his kilns, and burning it. This material, delivered on the farm, costs on an average twenty cents a bushel. The bushes and straggling woods were cut and made into fuel, the fields were squared out and put into shape, and the quick lime applied at once upon the land, in quantities of from fifty to two hundred bushels to the acre, no matter at what season of the year. When the lime was ready it was applied, by dropping it in heaps of five or six bushels each, and, as soon as sufficiently slaked by the weather, carefully spread on the soil. A great part of the land was so sterile that it had no sod upon it, and was sadly disfigured with gulleys made by the washing of the rains. In such fields as had a tolerable sod of grass, a slight dressing of barn or stable manure was obtained and applied with the lime, which being ploughed became at once productive; but where no manure was placed in aid of the lime, it was left untouched to dissolve with the rains and snow, and incorporate as best it might with the soil. Under this latter process the soil became gradually grassed over, and in two to four years, a fine coat of native blue grass (*poa pratensis*), and white clover (*trifolium repens*), affording beautiful succulent pasture, covered the ground. When this grass coating is accomplished, the land is in proper condition for cropping, and, with a thorough ploughing, yields abundantly of all the grains and grasses grown in this climate. Where there is no vegetable matter in the soil for the lime to act upon, I conceive the lime must have drawn most of the fertilizing matter from the air, condensing the ammonia therein contained, which is brought to it by the snows and rains. Of course all that is thus procured, is so much added to one's wealth by a very moderate outlay. It also seems to predispose the materials of the soil to form those associations and tendencies, which enable it to produce vegetation when in no condition to do so before.

In ranging over the estate, we examined particularly the land, from fields limed years ago, and in the fulness of their production, to those yet white with its recent application, and just looking green with the fresh verdure of the young grass. One field contained fifty acres of the most beautiful wheat I ever saw, promising to yield full forty bushels to the acre. Another, of seventy acres, was newly planted in Indian corn, and had a fine chocolate-colored soil; which had produced its sixty and seventy bushels per acre. The oat fields looked rank and fresh, and the grass lots for hay were, many of them, thus early, lodging with the over-growth of their burdens. Such timothy and clover, and such orchard-grass meadows, are rare in that region. In short, by the application of lime in this manner, or without the aid of stable manures, all the cultivated lands were teeming with fertility and abundance. Hundreds of acres thus limed for years, now in beautiful pastures, had been untouched by the plough, and were grazed by herds of cattle, sheep, and horses, rioting in its luxuriance. Eleven hundred acres had thus been limed, and new fields were waiting for this fertilizing stimulant, still in the process of application. I saw large tracts of land so sterile that no vegetation grew upon it, not even grass or weeds, separated only by a fence from those bearing the richest herbage. One had been limed—the other not.

I had never seen a specimen of agricultural improvement which had pleased or interested me more than this; and when, in addition to this teeming abundance, all the appliances of rural luxury and independence, buildings, orchards, groves, and delightful scenery, were added, the picture was full to admiration. Yet all this beauty, fertility, and abundance, was created by the simple application of scientific principles, with the aid of moneyed capital, to this body of otherwise inert and lifeless soil. The proprietor told me that his friends and neighbors had jeered, ridiculed, and blamed him for thus squandering, as they termed it, his money on such worthless experiments; but the result has equalled his warmest anticipations, and he has now the solid pleasure of looking at an estate, which, when he took possession of it, was absolutely worthless in its income, and not saleable at five dollars the acre, now worth eighty or a hundred. In addition to this improvement of the soil, ten or a dozen miles of durable and substantial post-and-rail fences of chestnut and cedar have been built, separating the farm into large and convenient fields, with commodious lanes and entrances leading from the mansion-house and farm-buildings. Ample hay and grain barns are erected in many of the enclosures, for securing the crops and feeding the stock; and altogether this may be termed a *pattern farm* of the highest order.

The question may naturally enough here be asked, how should this remarkable improvement occur in this country, and by one who was not bred a practical farmer? The answer is a simple and easy one: by the application of right principles to agricultural improvement. This gentleman possessed education, enlarged and intelligent views of agricultural improvement, had travelled extensively abroad, and profited by his foreign observations; and after returning to his native state, instead of slothfully sitting down in idleness and inglorious ease, at once applied himself to the improvement of his property, and in giving an example to his fellow-citizens of incalculable value. And yet millions of acres in that fine region, now yielding little or no income, might, by a very moderate outlay of capital, be made equally productive. But more of this hereafter.

Devon Cattle.—By far the best and most perfect herd of Devons I ever saw is kept on this estate. The originals of these fine animals were imported about the year 1819, as a present from the late Earl of Liecester, then Mr. Coke, of Holkam, England, to Messrs. Patterson and Caton, two distinguished gentlemen of Baltimore. Not being practical agriculturists, these choice animals met with indifferent treatment in their breeding, and for many years were neglected among the stock of their farms. But falling some years ago into the hands of their present proprietor, who readily saw their value for the locality and soil of his estate, he imported from Mr. Bloomfield (a principal tenant of Lord Leicester, and indeed the *real* breeder of the fine Devon stock, for which his Norfolk estate has become so celebrated) a most valuable bull, by which his stock was in a few years brought up to a standard, excelled probably by few herds of Devon cattle in England, and certainly by none in this country. A year and a half ago he made another importation of a two-year-old bull, certainly the most perfect of his kind, in symmetry and good points, that I ever saw. To a size abundantly large for all purposes of Devon stock, he united a fineness of touch, a delicacy of limb, and a vigor of constitution, such as I had not before imagined could belong to this ancient family of stock. In truth such a Devon I never saw! His color a deep mahogany, with the beautiful rich yellow ring round the eye, and the elegant slender white horn! All my prejudices against the Devons as being "pretty *little* cattle enough," were dissipated, and I at once acknowledged their value for the lighter soils of our country. In the pasture with this young bull were eighteen or twenty thorough-bred cows, large and beautiful; all a deep mahogany color, and hardly to be distinguished from each other, so much in shape were they alike. Their udders were large, with fine silky handling and genteel taper teats; and indicating by appearance good milking qualities. This their proprietor assured me they possessed in fully an equal degree to the common cows of our country, and probably superior. In another field were a score or two of thrifty young steers and heifers, the produce of the cows, and near by a home lot with a number of young calves of the present year.

I need hardly say, after thus expressing my admiration, that, before I left, I purchased three or four select young animals of this valuable herd, from which, with those I before possessed, will, I trust, in a few years, give me a herd of Devons equal to any other to be found. For general cattle purposes I advocate the Short-horns. They are, all in all, the finest cattle. But there is a very general and, in my opinion, obstinate prejudice in our country, particularly among the northern people and their descendants, for *red* cattle, especially *red* oxen; and your true New England men, when they work oxen altogether, would as soon be seen driving a mule and a goat together, as a pair of roan or spotted cattle. No—*red* is the color, and *red* they will have, and *red* they *shall* have, if I can aid them to it; and no other breed gives it in such deep, rich, unalloyed luxury as the Devons. This breed has sufficient size for working cattle, and in beauty of form is perfect.

Here too I discovered several specimens of beautiful South Down sheep, from the select imported flock of Mr. Rotch, of Otsego. Some fine blood mares and colts, to which has been added one of my own thorough-bred mares of the Barefoot stock, now in foal to Bellfounder. Even the barn-door fowls of the place were of choice and selected stock, being a cross of the large Bucks county fowl of Pennsylvania and the game breed; and they now rejoice in the acquisition of some nice young Dorkings.

But I weary your patience. To say that I was charmed, delighted, and exceedingly instructed, by my visit to this luxurious retreat, and much indebted to the refined hospitality of my esteemed host, would be barely common place. A proper delicacy forbids my saying more, and I would hardly have gone so much into detail, but for the rare and profitable example of highly improved agriculture here presented.

L. F. Allen.

Black Rock, 1843.

For the American Agriculturist.

NECESSITY OF WARMTH AND SHELTER, IN WINTER FOR STOCK.

Llangollen, Ky., Feb. 4th, 1843.

Dear Sir:—It is frequently asked by young farmers, to what kinds of domestic animals and stock is it advantageous to afford warm and comfortable winter quarters? The answer is—*to all;* from hens and chickens, to the horse and ox. There is great economy of food in affording shelter to all that breathe, in a cold climate, and to all animals that we wish to fatten, perfect quietude, or freedom from muscular exertion, is not less important.

All the food given to animals, goes to supply the waste in the system produced by the vital functions and muscular exertion, keeping the system in *statu quo*, or in increasing its bulk and weight, by addition, in full-grown animals, in fat, or in keeping up a supply of heat to the body. In cold weather a very large portion of the food is expended in generating heat, and just so much is lost to the production of fat, milk, eggs, &c. The necessity for generating animal heat from the carbon and hydrogen of the food, increases with the severity of the weather, for the faster the heat is abstracted from the body by the atmosphere, the faster must it be supplied. We know of no other source of animal heat than the oxydation of the elements of food by breathing, and their passing out of the body in the form of vapor, of water, and carbonic gas. All the food, then, that is thus burnt to keep up the heat of the body, is lost to nutrition. Artificial warmth, then, either from shelter or clothing, supplies the place of food—of that food thus expended to produce necessary heat, which would go, if that were supplied from other sources, to the formation of fat, or the supply of waste. All muscular exertion, everything that increases the frequency of breathing, causes waste, which must be supplied before any increase in fat, or milk, or muscle, can take place. Hard work, active exertion, and quick breathing, cause rapid *waste* of the parts of the system. This must be supplied by food before there can be any addition. Without this waste, the same food would go to *increase* the weight and bulk of the body. When animals are kept warm, clean, and quiet, about one half the nutritious matter (if it be diffused through a bulk sufficient for proper distention of the organs of nutrition) that is necessary to a wretched shivering existence, exposed to the inclemencies of the weather, will keep them in fine condition. And good shelters and warm clothing even, cost much less in the course of a few years, than large daily supplies of food, necessary to vital warmth, and expended and lost in producing it.

Independently of the question of economy of food, there is great comfort to a humane man in seeing all living things around him comfortable; and especially those to whom he is largely indebted for those comforts which he enjoys. Even when there are ample supplies of food to waste in keeping animals warm, still they suffer in very cold weather, if unprotected from cold winds, sleet, and snow. And it is painful to see them drawn up and shivering, turning their mute supplicating countenances to their masters, for protection from the pitiless inclemency of the weather.

The subject of these brief hints is so ably treated, and fully demonstrated in Liebig's Animal Chemistry, that it is greatly to be desired that his work should be in the hands of not the few scientific men, but of the people; and I should be greatly pleased to see an edition of it, in which the language in which so much important truth is embodied, should be adapted to popular comprehension. Many persons will not read it, and others will not understand it, in its present translation. His facts and the unavoidable inductions from them, bring us to a new era in physiology. Starting points that have not been approached before, seemed to have been reached, and a new direction will be given to our researches, and a more profitable one, for we shall seek attainable objects. We are yet barely in the dawn of the application of the inductive philosophy, and centuries will pass before mankind will be fully aware of the obligations they owe to Lord Bacon.

Very truly your friend and
Obedient servant,
John Lewis.

A. B. Allen, Esq., *New York.*

For the American Agriculturist.

IMPROVEMENT OF FARMS.

Plants as well as animals require food, which they obtain from the atmosphere and the soil. When land is naturally barren, or is impoverished by severe cropping, it can only be improved by good tilling and manure. In looking over our farming districts, we find as a general rule, that farmers do not appreciate the value of manure; but few take the trouble of informing themselves of its true nature, and upon what its peculiar effects upon the growth of plants depend.

Manure is made up of certain gases, a few chemical salts, and some other less important substances, which, when placed under favorable circumstances undergo certain changes, which fit them to afford what is requisite for the perfection of plants. When the chemical changes in decomposing substances are taking place, gases are formed which are sensible to the smell; upon these the most valuable quality of manure depends; we consequently see the importance of putting manure in a situation where these gases may not be lost, either in a compost heap well covered with substances which have an absorbing power, such as charcoal, common earth, &c., or with something that will by a chemical change give off what would be useless or hurtful to plants, and take up what is beneficial in its place. Plaster of Paris, potash, soda, common salt, &c., act in this way. Sometimes there is contained in the soil in a latent state, as much nourishment as would supply all the plants that could be raised on it for a long time, providing there was employed some chemical agent to liberate it. This accounts for the wonderful effects of lime in some cases.

All animal and vegetable substances contain the elements of plants; nothing therefore on a farm should be lost. If a farmer wishes to add speedily to his productions, he must convert every refuse substance into manure. The more manure he has, the greater will be his crops, and after a farm is once in good order, it is very easy to keep it so. Hundreds of substances are thrown aside and wasted, which would add to the quantity and improve the quality of the manure heap.

Manure is the laborer's friend; it makes the ground more easily tilled, and pays invariably for itself. In other countries they use much manure, for it is the only way they can produce the abundant crops that reward them for their labor. Every farmer should have a compost heap, into which he could put all his manure from his stables, and also deposite all his weeds, ashes, house slops, dead animals, feathers, rags, mortar, shavings, leaves of trees, &c.; and this should be constructed on a side hill if possible, that everything could be thrown in easily from above, and an opening left from top to the bottom on the lower side, so that it could be closed with boards shoved in proper grooves, which could be taken out separately, to facilitate the removal of the compost. Land is always best when it contains a proper proportion of clay, lime, and sand, with a suitable quantity of animal and vegetable manure. When either of these is wanting, it should be added, for it has been found that such additions have produced the most beneficial effects.

Our undivided attention should be paid to the improvement of the land we have under our care. If we employed more thought and reflection in our farming operations, and used the means in our power with more sound judgment, then could we expect to see the best results following our exertions. If farmers would commence a series of experiments on a small scale at first, and when they ascertained what would best answer their purpose, then pursue it, they would soon find how much more valuable and productive they would make their farms. There is no question but that one of our greatest misfortunes is, that we have too much land; we do not value it sufficiently; we do not properly attend to it. There are but very few who have ever put their lands to the test, to show what their powers are. A system of robbery exists over the fairest and most eligible land in our country; and when the land becomes partially exhausted, the husbandman, instead of improving his farm by good cultivation, and the application of a proper kind of manure, concludes to sell out and purchase another farm where land is less expensive and more productive,—a very bad practice, frequently bringing sorrowful disappointment from the severing of family ties and old associations, and also from blasted pecuniary expectations.

Such a spirit is manifested in every part of our country; even in Dutchess, one of the most productive counties in this state, we find that many farmers are becoming dissatisfied with their healthy and favorably-situated farms, and are emigrating to other states, where much uncertainty exists whether the climate will agree with them, or if they will ever receive sufficient returns to satisfy them for the sacrifices they must make. If such farmers would commence improving their lands, beginning on a small scale, they would soon find, that owing to the greater prices obtained for their produce in this market, they could compete with the farmers of any state of the Union, and would remain eligibly situated in a healthy country, having all the benefits of a long-established society of well-bred and intelligent people.

Henry A. Field, M. D.

New-York, March, 1843.

For the American Agriculturist.

SOUTHERN PRODUCTS.

Mississippi City, 18th Feb., 1843.

A. B. Allen, Esq.—Our country offers the strongest inducement to manufacturers, particularly of coarse cotton and woollen goods, which would find a large home market. The raw material being made on the spot, and then the article manufactured wanted for consumption; our fine water power, mild and healthy climate—very far surpassing for health any point in the northern states—would induce people skilled in the business to work here for the same wages they do North; and they would greatly prefer it when well acquainted with the facts as they really exist. I know the northern people generally consider the whole South a *graveyard*. The reason this idea is so prevalent is, that heretofore no attention has been given to the *healthy* portions of our country, because there the lands are so poor compared with those where the country is sickly, and we are now but *beginning* to learn the capabilities and value of our poor lands.

Another important branch of business is likely to do much for this section of country. The palmetto root, which almost covers the country near the seashore, is found to contain a large quantity of tannin, whether as much as oak bark I can not say, but from experiment, I *know* it contains plenty to answer all the purposes for carrying on the tanning business successfully. These roots lay almost on the top of the ground, three to ten or twelve starting from one common centre, or top root, and frequently grow ten feet long, and from two and a half to four inches diameter, of a spongy fibrous texture, the leaves springing out of the extreme end, which lengthens the main root as the old leaves fall off. The main root is attached firmly to the ground by small fibrous roots growing out, and directly down from the lower side of the main root.

This root can be dug up and ground cheaper than oak bark, besides the clearing of the land which is an important consideration, as taking up these roots has heretofore been considered the most expensive part of our clearing. All now sell our hides to the northern *patent tanners and shoemakers*, who instead of tanning, *rot* the hides, so as to make them soft, and then glue or paste, instead of sewing the shoes together, and then ship back and sell us what they call *cheap shoes and boots!* I wore out four pairs of these boots last year, and was barefoot above half my time at that. But hereafter we will tan our own hides with our palmetto root, and make our own shoes, one pair of which will outwear three of the patent steam-rotting machines. Thus you see there is a strong inducement for industrious, honest, and enterprising tanners and shoemakers to locate in this poor country, where they will not have to thaw their oil and wax by a fire, before they can put it on the leather and thread in winter; and you may depend upon it, the time is now at hand, when the people of the south will give great preference to articles manufactured in their own climate. This feeling has been brought about by the ignorance and fanaticism of some, and the bad faith of manufacturers; and unless the people of the north put a stop to these evils, they will be compelled to remove south if they wish to manufacture for the people of this country.

Upland Rice.—The upland rice yields a fine crop on our poor sandy ridges, and will not grow on wet lands. It differs very little in appearance from the lowland rice. It is generally planted in drills about eighteen inches apart, about the 1st of April, and worked with both plough and hoe to keep out weeds and grass. After the rice matures it is cut. It grows up from the root, and yields a good crop of hay the same season, and often springs up from the root the next spring. Another method, said by some to be better, is to sow broad cast, and harrow in, then cover the ground two inches thick with old rice straw, which keeps down the grass and weeds, and nourishes the growing crop. The upland rice will yield here about 1,000 pounds of clear rice per acre. Irrigation has nowhere been practised in this country, although it could be done with a trifling expense in many places, and I hope soon to see it fairly tried.

Our population is yet very sparse, and the forest and sea yield us a bountiful support without much work; here we do not feel the necessity of improving our resources. But a spirit of emulation in agricultural matters is manifesting itself, and we may reasonably hope soon to see a happy change here for the better. Seven copies of your paper are now taken in this neighborhood, and about as many more from various other places. A twelvemonth ago, there had never been an agricultural paper of any kind taken or read here. Our country at present is settled with a quiet, happy, and contented people, and a little more industry and intelligence would give us an enviable stand. All we want is a little more stimulus, which a few good, industrious, intelligent farmers emigrating among us would give, if our disease (idleness) did not prove most contagious, and seize on them before their habits of industry would on us.

I have not yet succeeded in getting the herba spagna grass seed from Italy. I yesterday conversed with a gentleman from Italy, who did not know this grass by that name, but thinks it the same as a grass called *sudda* (pronounced *sooda*) in the island of Sicily: he is also of opinion it will succeed well here. I tried last fall what is called bird corn here; I find I can make a large quantity of fodder by cultivating it—say three tons per acre each cutting, and it yields three crops a year. This, with the pea, sweet potato, and pindar vines, with crop grass, which grows very finely, we most rely on at present for hay. I see Dr. M. W. Phillips thinks the grass I brought from Cuba, the same as the Bermuda grass of Louisiana: it may be so, but I doubt it, although I think it of the same family. The Dr. I think is mistaken about its having seed; it has a *tassel* with the *appearance* of seed, but I have never been able to grow it from the seed, and have tried it faithfully. It matters not, however, what is its proper name; it has proved a most valuable grass for southern latitudes, and all I desire is that every one may reap as much benefit from it as possible. Many good judges think it superior as a pasture grass to the Bermuda of Louisiana: I am not able to give an opinion on that subject myself.

Cure for the Piles.—Carrying the common buckeye in the pantaloons' pocket, will cure the piles or any other inflammation about the anus. I can not give a reason for it, but it is nevertheless certain—try it.

Cure for the Cataract in the Eye.—The root of the weed commonly called the *devil's shoestring*, soaked in water and used as a wash, will cut the film (called cataract) off the eyes of man or beast, more effectually than the surgeon's knife, without pain, risk, or apprehension.

Very respectfully yours,
John J. McCaughan.

For the American Agriculturist.

INVERSION OF THE WOMB, OR CASTING OF THE WITHERS.

Mr. A. B. Allen: It is an old saying, that "accidents will happen in the best-regulated families;" and as it is important for every farmer to know how to repair the damages to which he is liable, I send you an account of an accident which occurred in my experience last month, and the remedy which was successfully applied.

One of my Short-horn cows dropped a calf one afternoon during my absence from home, and on the subsequent morning, was found lying in great distress with her withers down (as the term is with us), which I presume is the inversion of the womb, in consequence of the straining of the animal to rid herself of the placenta.

There was enough hanging out to fill a bushel basket, which was put back, and would not remain in its place, but was held by several men alternately until afternoon, when one of my neighbors came over and effectually remedied the matter.

The mode is as follows: The part hanging out must be washed with warm water and soap, and then put back by placing the fist against the centre of the mass, and press it into the vagina in the manner of putting on a stocking that has been turned inside out, as far as the arm will reach. Immediately, before the cow can by straining displace it, pierce with a pocket knife the lips of the vagina, and put through two pins of strong wood, about four inches long, and a quarter of an inch in diameter, so as to divide the opening into three equal parts. These pins must be secured by tying twine across in the manner of the figure 8, lying on the side, which prevents the lips from parting so as to come off the pins, which may be removed in two days.

When I returned home and found my cow in the situation mentioned, I expected to lose her, but she is now alive and well.

Some sew up the part, to prevent the withers coming out after being returned; but the pressure is so great when they get back, as to frequently tear out the skin, which is not liable to be done in the case of the wooden pins, and the latter mode is more simple and easy of execution.

Charles Starr, Jr.

Mendham, N. J., Feb., 1843.

For the American Agriculturist.

CULTIVATION OF SWEET POTATOES.

Log Hall, Miss., Feb. 10th, 1843.

Mr. A. B. Allen: I have tried the cultivation of the sugar-beet here for some three years, not extensively I admit, but sufficiently so for an experiment, and have not been able in the three years to pay myself for the trouble. Planting them side by side in garden and field, with the long blood-beet, I see no difference in point of size. I say I have not been paid for my trouble, as it is double the work, if not more, than to raise potatoes, and yet the beet is not, I think, a greater yielder. According to my limited experience, the same labor applied to the cultivation of sweet potatoes, will feed more, stock and do it better: nor is the sweet potato as troublesome to feed, nor yet more so to save. I would therefore advise all who can grow sweet potatoes, even if not above 250 bushels per acre, to do so, in preference to cultivating the beet. I have known 460 measured bushels made per acre, basing my opinion on the affirmation of a friend. The plan I have adopted in saving is pretty much as I now relate, putting up in heaps or a long pile as fancy directs at the time.

If in heaps, strike a circle 6 or 7 feet in diameter, level it off well, then put a layer of corn-stalks some 4 to 6 inches deep, on which place the potatoes as closely together as you can, ever using some care in placing them; then cover with corn-stalks some 6 inches thick, over which place boards if convenient; then cover up with earth some 6 to 10 inches deep, taking the earth from a ditch around the heap. After a few days, open a hole on the top to the potatoes, so as to give vent to the warm air, closing with straw when cool, and cover the hole with boards so as to exclude rain. I never dry them or select particular weather, though preferring dry weather for the operation, as more work can be done and the roots be put up in better order. If they should be wet when put up they will not injure; even pouring water on them in the heap has been practised by an old gentleman I know in South Carolina. I dig as soon after the vines are killed as will suit other work—never before. I have put up heaps containing 50, 60, 100, and 150 bushels; but where I put up many together, I make rows of them by levelling a bed, say 8 feet wide, and 15 to 20 or more long, drive stout stakes along the centre, say every 8 to 10 feet, fasten on a ridge pole, pile my potatoes up to it, then cover with corn-stalks, and put up long boards to rest on the ridge-pole, and cover with earth. When I use out of one end, I keep an abundance of oat-straw or hay, so as to preserve them entirely from changes of the atmosphere. I believe corn-stalks are better to place next the potatoes, as they will absorb the moisture measurably, and do not settle down so packed and close on the potatoes as grass does. When I have used grass the potatoes did not keep so well. Every farmer and planter should plant half an acre of potatoes to each hand, as they will feed anything but men and dogs *raw;* horses, cattle, hogs, and sheep, will all eat them greedily. A favorite mare here will absolutely paw the earth to get at them, and she will walk all over a potato patch in search of them, instead of going into a pea field. Yours truly,

M. W. Philips.

For the American Agriculturist.

BLIGHT IN PEAR-TREES.

A. B. Allen Esq.—Dear Sir: In the August No. of Vol. I., of the American Agriculturist, I find a notice of the blight in pear-trees. I will give you my observations on that subject the past summer, and although very imperfect, they may throw some light on a subject that is enveloped in mystery, notwithstanding all the numerous causes and preventives that have been published. On the 23d of May last, I was observing a pear-tree, some of the branches of which were dead, others with the leaves turning brown, the fruit dropping off, and what is peculiar to this disease, the branches in another part of the tree appeared perfectly healthy, and vegetation in full vigor. I commenced paring off the bark on the diseased branches, which presented quite a red appearance, and in places a reddish liquid was exuding through the bark. In these spots (after taking off the outer bark) there was a very small hole about the size of a number 10 sewing-needle, and on removing the inside bark to the wood, there the little destroyer was esconced, feeding on the life of the tree, to which they must be a deadly poison.

They were near, and in the body, and for several feet up and down, the bark and wood were stained as above. I shaved the bark all clean where the tree was affected, which was on one side from the roots to the branches. I found only six of the insects; they are inactive, about the size of the hole mentioned, and above the sixteenth of an inch in length. They have six legs, the sides a deep green, the rest part of a brownish color. They insert about half the length of their body in the wood. I was pretty well convinced at the time, that these insects were the cause of the disease, but they may simply be the effect of it. They do not appear to be a migratory insect, for there were other pear-trees standing within fifty feet of this one, unaffected two years ago. The tree which stood near this one died branch after branch, until the top was all cut away. Now this is one stage of the insect; and if we can find out its habits, there will be some chance for a remedy.

Professor Main, in his excellent treatise on the Physiology of Plants, mentions this disease called American Blight, and states the cause to be a very small insect, which, in its early stages, is not discernible with the naked eye. He calls it the *coccus*, or *Mealy aphis*, a species of the *Cochineal* fly of commerce. The effect produced coincides with my observations; but the insect as I saw it differs in color from the one he describes as doing the mischief. He says they are so light that they are easily wafted from tree to tree, which can not be the case with this one I speak of. Apple-trees are subject to a similar disease, and I have discovered the red juice, and the red appearance of the bark and wood, but not the insects.

There is another insect that works upon the pear-tree, giving it the appearance of blight, but it is not the cause of the destruction of our pear-trees. The fly deposites its egg in the tender part of the end of the twigs, and hatches into a brown grub. When full grown, it is about an inch in length. It eats out the wood, and leaves the bark entire for its habitation; of course the twig dies, the leaves turn brown, which gives it much the appearance of blight. I have cut off these twigs and found that they were hollow for six or eight inches. I can tell you nothing about the habits of this insect.

Weights, and pressing into lard of four pigs.—I will give you a statement of four pigs raised and fattened by one of my neighbors, David Hadley; not for their great weight, but showing the profit for the keep. The weights were 502, 456, 418, and 414 pounds, at eighteen months old.

The heaviest one had corn all winter, what he would eat, and corn and slop from the house during the summer; the other three had four ears of corn per head a day through the winter, and run on blue grass pasture through the summer. The owner told me he had fed them about fifteen bushels of corn per head since he put them up to fatten. They were perfect pictures of the grunting family, and when killed they were skinned, and all rendered into lard, except the hams and shoulders. They turned out 1,200 pounds of good No. 1 lard. The object in skinning was to keep the gum and oily matter in the hides out of the lard.

They were half Grazier, of Mr. Neff's stock of importation; the other half were what he calls his Liverpool hogs, you will recollect them.

To destroy bugs on potato-vines.—An old gentleman informs me he has completely mastered the potato bug, by boiling up the roots of the mullen, and sprinkling the liquor on the tops early in the morning. He says it has the same effect on tomato-vines.

Remedy for sore teats and inflamed udders.—White-lead and sweet-oil are excellent for cracked or sore teats of milch cows.

Flax-seed oil, well rubbed on the udder when inflamed and caked, will allay inflammation and soften the hardness of the bag. Rub well twice a day until the inflammation subsides.

With much respect,

E. CARPENTER.

Brier Patch Cottage,
Warren Co., Ohio, Feb. 20, 1843.

For the American Agriculturist.

CURE FOR INFLAMED EYES OF THE HORSE

Middletown, Ohio, Feb., 1843.

MR. A. B. ALLEN: Notwithstanding my occupation requires my attention and exertions, in attempting to cure or palliate the "ills that flesh is heir to" in the human species, my sympathies have been occasionally enlisted in behalf of that noble animal upon which we are so much dependant for many of our pleasures and comforts, and derive so much important service—the horse, in consequence of the empyric and barbarous treatment frequently practised upon him.

If the animal who claims for himself the image of his Maker, is willing to indulge in "Brandreth's Pills, Lobelia Magnetic Ether, and Jew David's Plaster," and write for his epitaph, "I was well, took physic and died," let his curiosity be gratified; but while we assume to ourselves the guardianship of the fourfooted part of creation, let us discharge the duty in that manner that shall at least entitle us to the virtue of humanity.

Not unfrequently when I have been giving my horses high feed and severe service in hot weather, over hard and dusty roads, I have observed them frightened and shy from objects to which they usually paid little or no attention; and upon examination of the eyes, have discovered the external membrane (*tunica conjunctiva*) thickened so much as to impair or obstruct the vision, presenting a whitish appearance occasionally in spots, but frequently involving the entire membrane covering the organ. At this discovery many kind friends, actuated by the best of motives, would volunteer their aid and advice, for the purpose of removing the difficulty. Mr. A., exhibiting an air of great confidence in his skill in such matters, would say: "You must pound glass until it is very fine, and blow it into the eye through a quill, to *cut the scum.*" A remedy, or rather an intended remedy, that would most assuredly render him blind, even though the disease should fail to accomplish that result. Then comes Mr. B.: "Sir, you must blow burnt alum in that eye." Mr. C., quite as knowing as his neighbors in these affairs, makes the following prescription: "Blow powdered *blue stone* into it, and rub a little rabbit's grease above the eye, and my word for it, to-morrow morning it will be as bright as a diamond."

By just such treatment many a noble roadster has been prematurely consigned to the cart or treadmill; whereas, had the matter been intrusted solely to the operations of Dame Nature, the result would have been widely different.

The course that I invariably pursue in such instances, is to keep the animal in a dark stable, to be fed upon hay, or if practicable, fresh cut grass and coarse bran—bleed freely from the mouth, and administer one and a half pounds of Glauber salts, two drams of nitre, and fifteen grains of tartarized antimony in a bucket of water, and repeat the same daily until a free purgative operation is produced. The animal will be invariably found in a feverish condition, and if kept from water for a short time will drink the mixture freely. If these means do not soon produce a salutary impression, I bleed from the large vein immediately below the eye. By placing the thumb of the left hand firmly upon the part, the vessel soon becomes distended, and the operation may be most conveniently performed with a common spring lancet. By this means I have frequently succeeded in extracting from 12 to 20 ounces of blood, which has acted like a charm, by relieving the engorged vessels of the inflamed membrane. The whitish or sometimes yellowish appearance, depends upon the effusion of coagulated lymph deposited during the acute stage of the disease. When the absorption of this does not progress freely, and the eye fails to assume its accustomed lustre and transparency, I blister a semicircle below the eye, one and a half inches in diameter, by applying daily with the point of the finger, a mixture of three parts of the common blistering preparation as obtained from the druggists, and one part Venice-turpentine. Sometimes the other membranes of the organ become diseased from similar causes, to remedy which, the foregoing treatment as detailed will be applicable. Care should be observed in not too suddenly exposing the patient to a strong light, high food, or active service.

Thus, I have given you, as our Buckeyes term the science, a chapter on "horse-doctoring," and if you perceive anything in it that will repay you for the trouble, you are at liberty to publish it, with the promise, if it meets your approbation, of resuming the subject in some future number.

ANDREW CAMPBELL, M. D.

For the American Agriculturist.

POUDRETTE AS A MANURE.

A. B. ALLEN, Esq.: I wish to avail myself of a small space in your excellent journal, to call attention to the subject of Poudrette as a manure. You are fully aware of the importance to the cultivator of the soil, of a good supply of manure; and your experience at home, and your observation in Europe, enable you to appreciate the value of portable or concentrated manures. *Poudrette* has long been in extensive use, and held in high estimation in France, and *crushed bone* is extensively used in England, to great advantage; whilst in this country there is only here and there one, comparatively speaking, who has used either, or who appreciates their value as fertilizers.

It is nearly six years since the first effort was made in this country to prepare poudrette, and introduce its use among the farmers in the vicinity of New-York; but owing to various circumstances, its use has not been extensive until the two past years, during which it has rapidly increased, and *is* still increasing. The present indications are, that the demand will increase more rapidly than the supply; and that in the vicinity of all large cities and towns, it will soon be in general use, as far as it can be obtained.

There has been a strong prejudice in the minds of many, who know nothing of its value, against the use of poudrette; yet, in *almost* every experiment from which I have heard any report, it has been successful, and in many cases *eminently* so. It has been extensively used on Long Island, both on a sandy and clay-loam soil with great success; also in New-Jersey near the seacoast, as well as in the interior; also along the Hudson river, and in Connecticut, Rhode Island, Massachusetts, and New-Hampshire near the sea coast; and in Maryland, Virginia, North and South Carolina, and Georgia, in small quantities, to the satisfaction in almost every instance, of those who tried it, or saw its effects.

The question is often asked, "On what soils is it most useful?" In reply to which, I can only say, that so far as I can judge, it will be found useful on any soil, and on *all* soils; but probably *most* so on a sandy-loam, or light soil with ordinary rains; but in a *dry* season, I think it will do best on a clay-loam. Some of the most satisfactory experiments which have been made were on the poor sandy lands in Monmouth County, New Jersey.

Those farmers who have to *purchase* manure, and haul or transport it any distance, will find it for their gratification, and I think for their *interest*, to make an experiment with poudrette in comparison with other manures. It is estimated by good judges, that one bushel of poudrette is equal in fertilizing properties, to *fourteen* bushels of good stable manure,—some say *twelve*, and others *sixteen;* but I estimate it fully equal to fourteen bushels. If this estimate of its relative value is correct—if a barrel containing *four* bushels is equal in value to *sixty* bushels of stable or yard manure, then certainly lands may be improved which have heretofore been considered of little value, as the cost of transportation is comparatively trifling.

I send you herewith a pamphlet, containing reports from practical farmers in New-Jersey, New-York, Connecticut, and Rhode Island, some of whom have used large quantities of poudrette for several years in succession, on various crops and different soils; and but for the crowded state of your columns, I should request you to publish some of them, as I am aware that your readers will prefer to have the *facts*, in the language of those who recorded them, rather than my opinions. On this particular point I agree fully with them, and will therefore give a few paragraphs, though I would much prefer to give as many pages, from the pamphlet.

Dr. Josiah Bowers, of Smithtown, L. I., who has used over 3,500 bushels of poudrette within the last five years, says: "One half of another field of *ten* acres was planted with a gill to the hill, and the next day the other half of the same field was planted without any manure. Both parts came up equally well, but that treated with poudrette very greatly exceeded in rapidity and vigor of growth, being at least twice the size of the other at the time of *second* hoeing. At this period I applied an equal quantity of Poudrette per acre, to that which had none at planting, as had been put in the hill of the first, sowing it on the ground at broad cast, and working it in with the cultivator and hoe. The result answered *fully* my expectations. That matured in the hill maintained its superiority for a short time, but it soon became visible that its *rival* was gaining upon it; and when cut up no material difference could be perceived in the crop, both being excellent for the season."

Dr. Bowers says also in a letter of more recent date: "Another year's experience in the use of poudrette has, if possible, increased my confidence in its great utility. My opinion of its value on most crops was expressed in a former communication; and the correctness of that opinion has been fully confirmed by further use. The past season I applied it principally to oats and wheat; and it may be sufficient to say, that the result was entirely satisfactory. Indeed, the convenience and advantages resulting from the use of this article are so great, that one accustomed to possess them would hardly think himself able to carry on farming without them."

Mr. Fullagar, an experienced gardener, in the employ of S. W. Anderson, Esq., at Devoes Point, Westchester County, speaks of its astonishing effects on watermelons, as follows:

"I planted watermelons in rather poor and gravelly soil in 1841, by digging holes 18 inches wide, and put one quart of poudrette, mixed well with earth in each hill; when the plants came up, I added one pint more of the poudrette to each hill, spreading it about 3 feet, and hoeing it well in. The effect was that the vines grew vigorously, and in the small patch of 3 square rods of ground I gathered 63 melons, weighing from 30 to 40 pounds each.

"I gave some of the same seed to a neighbor of mine, who planted it by mixing one shovelful of good yard manure to each hill: the soil was the same as mine, and the largest melon produced in the patch did not weigh over 18 pounds. When he discovered the difference, he at once made up his mind to subscribe for a share of your stock, which he has done, and is well pleased with his bargain."

Mr. Edward Condict, of Morristown, N. J., in a letter dated July 25, 1842, says: "Early in October last, I used the poudrette on a loamy soil, somewhat inclining to clay, which I had prepared for wheat. There was no difference in the soil nor in its preparation, except that on about one-fourth part of it, after the wheat was sown, about twenty bushels of the poudrette to the acre was also sown, broad cast; and the result is, that on harvesting that part where the poudrette was put is much the heaviest grain, and but very little injured with the rust or mildew, while the *other* part of the field is considerably injured.

"I am so well pleased with the poudrette, that I shall for the future discontinue the practice of using barn-yard manure in the hill."

Dr. Henry Fish, of Salisbury County, in a letter dated Aug. 4, 1842, says: "*I have found poudrette sprinkled on vines, the most effectual application to destroy insects* which were eating the leaves or stalks, more particularly the large black insect which destroys the vine of the winter squash in autumn. I have not been troubled with worms in the corn field since I have used poudrette; but I do not infer from my limited experience that it will always prevent their ravages."

I could go on indefinitely almost with similar statements, but I dare not extend.

D. K. MINOR.

118 *Nassau Street, N. Y.*

For the American Agriculturist.

HORTICULTURAL CALENDAR FOR APRIL.

During the past month the weather has been unusually cold, and the season consequently so retarded, that the calendar of the last number will answer, generally, for this. It is frequently the case, when the season is very late, that vegetation comes forward with an increased degree of rapidity, and, unless some care is exercised, will often be in full vigor before the cultivator shall have finished transplanting. He should, therefore, make this his *first* business, on the frost leaving the ground; seeds can be planted, and other work performed, at a subsequent period.

Kitchen garden.—During this month, early cucumbers, melons, cabbages, cauliflowers, lettuce, radishes, &c., which have been brought forward in the hot-bed, should be transplanted into the open ground. The asparagus bed be attended to, if not prepared before, according to the directions of last month. All kinds of table vegetables and early root crops can be sown in the open ground. Tomatoes, egg plants, and peppers, that have been forwarded in pots, can be planted out the latter part of the month.

Fruit Garden and Nursery.—All kinds of fruit and forest trees, and shrubs, should be transplanted this month, before the leaf buds shall have come out. All grafting and spring inoculating performed. Strawberry beds dressed and cleaned. Currants, raspberry, and gooseberries, that have not before received attention, can now be pruned; the latter should be pruned to open heads for the admission of sun and air, be well manured about the roots, and the soil made loose and mellow with the spade; the roots of peach trees be examined, and the worm cut out with a knife. Cuttings can also be made for the purpose of grafting, for the propagating of trees and shrubs.

Ornamental Grounds.—Bulbs that have not yet started ought now to have the earth about them stirred, to the depth of three or four inches. The borders of the flower garden be made up, and perennial herbaceous plants transplanted. Seeds of annuals should not be sown until next month. Hedges and shrubs may be trimmed, and box-edging set out. Put in order the gravel-walks and pleasure-grounds, and, if necessary, give the lawn a top-dressing of ashes.

S. B. PARSONS.

FOREIGN AGRICULTURAL NEWS.

By the steam-packet Columbia, we have our files of European journals up to the 4th March.

Markets.—Cotton has fallen ½d. since our last advices. The importation into Liverpool was very large, but the sales, we are glad to see, correspond—130,000 bales having been taken during the last month; and it is calculated that the low price will have a decided tendency to increase the consumption of this great staple. Cotton is now lower by one penny per pound than it was ever known before.—In flour, there seems to be nothing doing, and the price has given way 1s. per bl.—Tar and turpentine are nominal.—Tobacco has fallen ½d. per pound. An extensive business was doing in it, and the market, a few days before the packet sailed, had become quite firm.—Quercitron bark dull.—Ashes the same.—Tallow has improved.—Beef, Pork, and Lard, of this year's packing, after the English method, are selling well, and much liked.—Rice has fallen a trifle.

Money is as abundant as ever, and large sums are lying in the hands of capitalists unemployed. The Columbia brings out one and a half million dollars of specie. The rate of interest continues as low as before—1½ to 2 per cent. The Bank of England is discounting at 3 per cent.

Great Snow Storm.—The snow seems to have fallen as deep in England, almost, as here, and it is possible it may have an injurious effect upon the coming crop of wheat.

The Corn Laws.—Wheat and flour, by the way of the St. Lawrence, whether of Canadian or United States production, it is thought, will be admitted soon at a mere nominal duty. If so, it will greatly benefit the West.

American Credit still stands wretchedly low in Europe, and seems to be in a pretty hopeless way.

Sheep Breeding.—In the New Farmers' Journal, we see that Mr. Richardson, of Lincolnshire, has great faith in what he calls his improved or new Leicesters, and offers to show three weathers, for fifty guineas, against any other breed in England, at the forthcoming meeting of the Royal Agricultural Society at Derby.

Buffaloes in Smithfield Market.—Several of these were imported from Gibraltar, and sold readily there; whether for meat, or as objects of curiosity, we do not see stated.

Influenza among Stock.—This contagious disorder seems to continue with unabated violence in England. One extensive cow-keeper, in the vicinity of London, lost 170 cows from his herd, and another 40, within four weeks.

Breeding Rabbits.—A farmer in Ringmer, who had bred rabbits for some years, says that they have paid him as well as a flock of sheep, and he annually sends 7,000 to the London market.

THE FARMERS' HERALD, *edited by William H. Evans.*—This is a new work, of 16 pages, double columns, somewhat larger than our own, issued monthly, at Chester, upon the same principle as the agricultural publications of America. The price is 3 pence per number, *stamped edition*—equal to 72 cents a year of our money. We often asked, when in England, why a cheap work for the farmer was not issued, but never received a satisfactory answer. We have the first three numbers of the The Farmer's Herald now before us. It is handsomely printed, with clear type, and on fine paper, and is edited with variety, spirit, and ability; and we hail its appearance with great pleasure. Its low price must insure it a large circulation among the small farmers, who have hitherto, unfortunately, been cut off from much valuable agricultural information, in consequence of all the periodicals on this subject heretofore published in England being issued in too costly a form for their means. We tender our best wishes of success to the Herald, and condense some paragraphs from its quoted matter.

Cure for the Red-water in Cattle.—Take a mixture, of equal parts of oleum philosophorum, oleum aspic, and oleum terebinthum, and put sixty to seventy drops in half a quart of lukewarm water for a middle-sized cow, and from thirty to fifty for a calf. If it does not cure in twelve hours, repeat the dose.

The Epidemic among Cattle in Ireland is called pleura-pneumonia, or galloping consumption, and is thus described: Acceleration of the pulse, which ranges from 80 to 120. The animal invariably hangs the head, accompanied by dryness of the muzzle; the flanks heave according to the severity of the disease; a husky cough, weeping from the eyes, total loss of appetite, grinding of teeth, secretion of the milk suspended, the belly drawn up, a low moaning, together with a grunt at every expiration—the lungs appearing, also, to be filled by a painful effort only. These symptoms are all progressive.

The treatment should consist of active blood-letting, when the first symptoms appear, to be repeated afterward, if necessary—followed up by sedative medicines and general spare diet. When an animal is seized, it should be bled at once, this remedy being peculiarly applicable to affections of the lungs, and the best advice should be procured. If this treatment be not followed in the early stages, rapid effusion sets in, and no power can save the animal. From observation, we are also of opinion that high bred and highly fed cattle are more subject to attack than those which have been less attended to.

Importation of Alpacas.—Seventeen of these splendid South American sheep have recently been imported into Liverpool. They had been five months upon their voyage, but arrived in fine health, and are for sale, by the lot, for £350. The Earl of Derby sheared a fleece of 17 lbs. weight from an Alpaca last year. We are of opinion these animals would flourish better in our climate than in England; it being drier, and more like their native region of the Andes. We think, however, from what we saw of them abroad, that they would be more ornamental than profitable to the American farmer.

Changes in Composition of the Milk of a Cow, according to its Exercise and Food.—The Chemical Gazette reports a lecture on this subject by Dr. Playfair. He has adopted a modification of Boussingault and Lebel's method of analysing milk, which he recommends as more exact; and he finds considerable difference in the amount of butter produced from it when the cow is at rest, or when exercising. We quote from the lecture so much as regards this subject, as being somewhat curious:

The cow being in good milking condition, and at the time fed upon after-grass, he ascertained the average amount of her milk for five days, and then proceeded to analyse it. In the first day it was observed that the milk of the evening contained 3.7 per cent. of butter, and of the following morning, 5.6 per cent. The deficiency in the first observation is referred to the consumption of a greater portion of the butter, or its constituents, from respiratory exodiation during the day, when the animal was in the field, than during the night, when it was at rest in the stall. When confined during the day, and fed with after-grass in a shed, the butter amounted to 5.1 per cent. When fed with hay, the butter was 3.9 and 4.6 per cent. When fed with portions of potatoes, hay, and bean flour, the butter was 6.7 and 4.9 per cent.; with hay and potatoes, 4.6 and 4.9 per cent.

The author then examines Dumas's theory of the origin of fat in animals, in reference to the foregoing experiments, and concludes, in opposition to that theory, that the butter in the milk could not have arisen solely from the fat contained in the food. Hence it must be produced by a separation of oxygen from the elements of the unazotised ingredients of the food of the animal, in the manner pointed out by Liebig. He then quotes, in favor of the same conclusion, several experiments of Boussingault, and observations of dairymen in different localities. Potatoes are particularly favorable, both to the flow of milk and increase of butter, from the starch they contain. So malt refuse. Porter and beer are also well known to be favorable to the production of butter, both in the milk of women and of the cow, although these fluids do not contain fat.

The production of caseine in the milk is then considered in reference to the quantity of albumen in the food supplied on different days to the cow, and to the supposed destruction of the tissues by muscular exercise. Pasturing in the open field is more favorable to the formation of caseine, while stall-feeding is more favorable to the formation of butter. It is then shown that the proportion of butter in the milk of woman is increased by rest and the diminution of the respiratory oxidation.

From the proprietor of the London New Farmers' Journal, we have received three cuts of Mr. Thomas Bates's celebrated Short-horns, viz: Dutchess 34th, Duke of Northumberland, and Cleveland Lad. We give the portrait of the former on the opposite page, and the two others will follow in succession for May and June.

Dutchess 34th is the most splendid cow we ever saw, and we know of nothing that can compare with her, except two three-year olds that we were shown along side of her at Kirkleavington. She is descended from the old stock which has been bred in Durham for two centuries, and has the distinctive mark of the short, fine, clear, *upturned*, waxy horn, peculiar to this superior tribe. She is now nine years old, has had eight calves, and, though repeatedly shown against the best cows in England, has never been beaten. She was offered a few years ago, by her breeder, to come to America, but was declined, as we understand, through the influence of Mr. Whitaker; whether because he was not aware of her merits, or that he thought she would make too fine a show along side of much that he sent out here, we did not learn. Had our breeders possessed her, and a few others, at the time offered, our Short-horn stock now could not be beaten in England; as it is, we must still continue to purchase for improvement. If the committee for the fortheoming Show and Fair of the New York State Agricultural Society, wish for a model to judge cows by, at the meeting at Rochester next September, we commend to them the superb outline of Duchess 34th. For the history and tradition of this stock, and all particulars regarding it, we refer the reader to September and November Nos. of this paper.

Introduction of American Roses.—For the information of our western friends, we notice in the Gardener's Magazine, that two new American roses have been recently introduced into England, viz: the *Rosa rubifolia elegans*, the Prairie Rose—and *Rosa rubifolia*, the Prairie Queen.

Predilection of English ladies for Gardening.—Some young ladies lately residing in London, where they have no garden, have contrived a very ingenious substitute for a hot-bed, by having recourse to their side-pockets as a source of heat for germinating seeds. The seed, enveloped in some moist moss, is put in a small tin case, commonly one which has been used for peppermint lozenges, or acidulated drops. The case, so filled, is carried about the person constantly during the day, and put with the pocket under the pillow during the night. When the seeds have germinated, and the plumule, as well as the radicle, has appeared, the seed, having now become a plant, is taken out and planted in a pot. The same ladies have germinated seeds by suspending them over water in a hyacinth glass, or small carafe; and in this manner they have raised trees from filberts, which, being afterward planted in the open ground in the country, have, in the course of a few years, borne fruit. They have also raised oaks, sweet-chestnuts, and various other plants.

Recipe for destroying the Bug, Scale-red Spider, and Green-fly, in Hot-houses.—Take half a pint of stone lime, and half an ounce of black sulphur, and mix them well up together in four gallons of water.

Veterinary Medicine.—Under this head, the Edinburg Quarterly Journal of Agriculture for March, has a review of Percival's second volume, of 400 pages, on the Disorders and Lamenesses of the Horse; A Manual of Veterinary Science, by Dick; and a German work on the same subjects; and, by way of calling attention to the importance of a better knowledge of the veterinary art, estimates the value of horses, cattle, and sheep, in Great Britain, at £120,000,000 sterling (10,000,000 higher than stated in our last); and that there is a loss of two millions sterling annually to the nation, by disability, disease, and death, over what there probably would be, if a proper knowledge of practice prevailed in regard to the treatment of those animals.

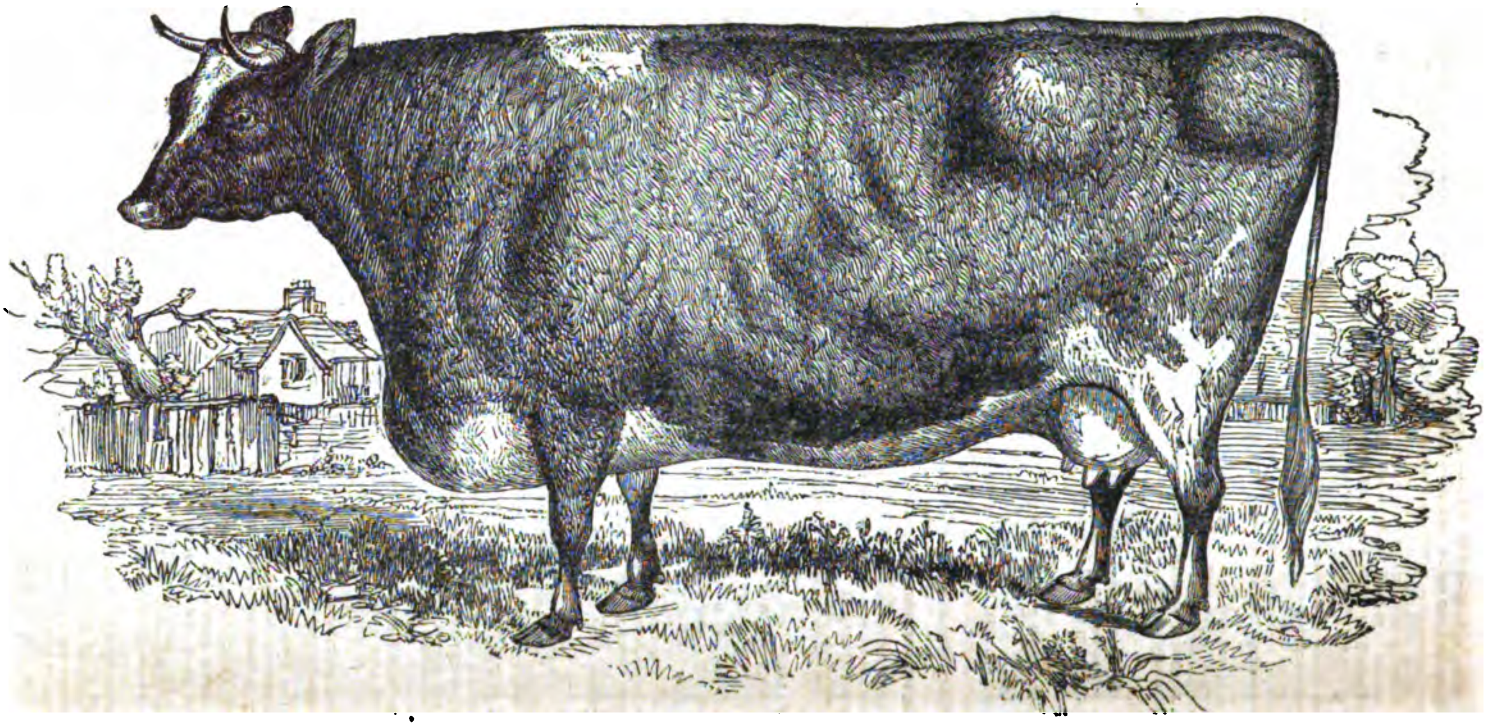
The Works of George Sinclair.—These works have passed to a new edition, under the supervision of Cuthbert W. Johnson, Esq.

Destroying Insects.—The Gardener's Gazette suggests, as one means of destroying insects that are injurious to fruit-trees and vineyards, to light piles of brush-wood when they are about depositing their eggs, and that, attracted by the light, they will fly to it by myriads, and thus perish in the blaze. Often, when engaged in the exciting sport of spearing fish by night, in the clear streams of New England, and on the Niagara, have we had our torch-lights literally extinguished by clouds of insects from the adjacent forests, and been obliged to return home quite *fishless*.

Cultivation of Wheat.—We find in the Farmers' Magazine that the Chelmsford Club decide, from experience, that salt and lime, applied to the seed of wheat (probably in the same manner as we do here in the United States), are destructive to the slug and wire-worm; and that lime is beneficial to the crop, both before and after sowing it; that a good clover ley is best calculated to produce a full crop of wheat, and a bean or pea etch is the next best preparation. The March number of this periodical we find rather a dull one. It is entirely too much filled up with Guano as Manure—making the whole subject a regular *bore*. The engravings are a fat Durham cow, and a fine pig of the Yorkshire Grazier breed.

To fix Ammonia, and disinfect Night-soil.—Add two cwt. of gypsum to one ton of night-soil, and it will fix the ammonia, which contains the nitrogen. Burnt bones will also fix the ammonia, and disinfect the

DUTCHESS 34TH.—(FIG. 6.)



The Property of Thomas Bakes, Esq., Kirkleavington, England.

night-soil. Dry coal-ashes, and charred substances of any kind, are destroyers of the bad smell. Soot mixed with saw-dust answers both purposes.

JOHNSTON'S LECTURES ON AGRICULTURAL CHEMISTRY AND GEOLOGY—28th and 29th Nos.—The principal subject these numbers discuss, is the change of soil and grasses; and practical experiments are given on different methods of cultivating roots, grain, and grass crops.

Cure of the Glanders in the Human Being.—In the Veterinarian for March, we find an account of a French groom being cured of this disease in Paris. The case is pronounced *unique;* for, in all the instances of glanders in the human subject hitherto reported, the disease has universally proved fatal.

Nitrate of Soda.—The Gardener and Practical Florist states, that two cwt. per acre is recommended for farm crops; 6 oz. in 4 gals. of water for celery; 1 lb. in 12 gals. for dahlias; 1 oz. to 1 gal. for strawberries; and 1 lb. to 8 gals. for onions.

Gas Liquor, such as was formerly turned into the Thames, used in the proportion of 3 parts to 20 of water, has been tried on grass, and found to quadruple its product.

Grafting Wax.—Take 4 oz. pitch, 4 oz. resin, 2 oz. beeswax, and 1 oz. lard, and melt them well together.

PAXTON'S MAGAZINE OF BOTANY, for March, is embellished by the *Echites splendens,* splendid echites; *Manetha bicolor,* two-colored flowered manetha; *Digitalis purpurea superba,* purple foxglove, superb variety; and the *Campanula grandis,* large bell-flower—in the usual beautiful coloring and truthful drawings of this superb work.

STEPHENS'S BOOK OF THE FARM.—Part XII. is received. The subjects of which it treats are, the corn markets, forming dunghills and liquid manure tanks, irrigation, cows calving, and of calves.

Cultivation of Sugar-cane.—Among the new works lately issued upon agriculture, and which may interest our southern readers, is a volume called The Nature and Properties of the Sugar-cane, with Practical Directions for the Improvement of its Culture, and the Manufacture of its Products, by George Richardson Porter. It is a work of 240 pages, large octavo, illustrated with engravings; and the price here is $3 25.

Through the politeness of the Secretary of the American Institute, we are favored by the following letter from one of its officers, now travelling in Europe, and hope to hear from him occasionally direct, during his stay there. This letter should have appeared two months since, but accidentally got mislaid.

SMITHFIELD CATTLE-SHOW.

LONDON, *December* 17, 1842.

T. B. WAKEMAN, Esq.

MY DEAR SIR: By this conveyance, I forward you a parcel containing a paper—the Illustrated London News—profuse in particulars of the recent Great Cattle Show of the fat cattle of England, held in London. In the parcel are also a number of Bills which I collected among the various exhibitors of agricultural implements, most of them having wood-cut representations of the machines to which they refer. I deem this the best means of conveying to you the form and construction of the most favorite articles in this line in use here. Among the hardware articles was an axe, polished and blued in imitation of Collins's, in Connecticut. The maker's name is Fenn, and it was labelled "The celebrated American Axe, with which they fell their great forests." Although not as well shaped as the original in our own country, or as well finished, it was decidedly the prettiest and most showy thing, in the hardware line, in the exhibition. The variety of plows, straw-cutters, cultivators, seed-planters, &c., was very numerous and extensive.

I also send a small parcel containing a sample of compost manure, which has been used here with great effect. It contains blood, oil, charcoal, and, I believe, ammonia. The proprietor was on the ground, and took many orders. It is calculated particularly for a loose, porous soil, like Long Island. It is now black and damp, like coarse French snuff, when fresh; but I suppose it will be dry when you get it. A poudrette man was near by, but this person outsold him—see bill inside the parcel. The specimens of beets, carrots, turneps, and parsneps, exceeded anything in size and perfection of shape I have ever seen. Of the animals, it is needless to say, that, for beauty of proportion, smallness of bone, and excess of fat, they exceeded all of which I had ever before any conception. It is said to have been the finest show of fat cattle ever seen in England.

Inasmuch as the exhibition was in the extensive Horse-Mart and Carriage Repository, adjoining the great Baker-street Bazar, a passage was made to communicate therewith; and as this place is occupied as a kind of market for the sale of all kinds of goods, wares, and merchandise, arranged on stalls attended by females, the *toute ensemble* made up, perhaps, the most perfect exhibition that an English Institute could make at this day. The place, during the week, was the most *fashionable* resort in London for the nobility and gentry. The space was kept remarkably clean, and, for comfort and convenience, did great credit to the managers. The English farmers, in their frocks, in attendance on the beasts, added not a little effect to the general interest of the show. Were I to go into details, I fear I should be thought too prosy; and I only wish you had been here to have attended.

The surprising increase in the perfection of well-bred animals in this country, for the few past years, is only positive evidence of that success which awaits the mass of American cattle-breeders, instead of the few at the present time. The mutton here is decidedly superior to ours. In fowls, we surpass them altogether. In fruit, we are far before England, in variety and flavor, except in pears; and this fruit is much superior, in taste and variety, to what we have produced. I speak of the fruit found, during the seasons of its perfection, in the great London vegetable mart, Covent Garden.

Editor's Table.

☞ NOTICES OF THE PRESS.—We have received several valuable works to notice this month, all of which are in type, but unavoidably omitted till our next, for want of room. Among them are Downing's Cottage Residences, one of the most tasteful and useful books of the day; Travels over the Rocky Mountains and in the Oregon Territory, by Rev. Thomas Farnham; Hon. H. L. Ellsworth's Report—the last two published at the Tribune office, and for sale at 25 cents each; Stephens's Book of the Farm; Paxton's Magazine of Botany; The Zincali, by the Rev. George Borrow, author of Bible in Spain—two editions, one 25 cents, and the other 38 cents; Prof. Murray's Encyclopedia of Geography; Johnson's Encyclopedia of Agriculture, by an American editor, at $4—one fourth the price of the English edition; Liebig's Animal Chemistry, new edition, at 25 cents; &c., &c.

TO CORRESPONDENTS.—R. H. Hendrickson, Geo. W. Williams, J. Dinsmore, E. Cornell, Viator from Wiskonsan, Examiner, George W. Taylor, C. N. Bement, F. T. Vail, and T. M. C., will appear in our next. We beg pardon of the latter for not inserting his communication this month. It was put in type, but, in making up the paper, was accidentally omitted.

E. C. is informed that Bellfounder will stand at Middletown the ensuing season. See advertisement.

T. B. S. Your books and seeds are sent to Philadelphia, as directed.

A. B. The same.

J. D. We are promised an article on the cultivation of Madder, &c., for May No., from the pen of a practical man. You will see part of your inquiries answered by back Nos. of American Agriculturist just sent. All others will be replied to privately, in a day or two.

G. W. W. The same.

Z. A. P. Your plows were shipped on the 30th ult. They could not possibly be got ready before. Cultivators are promised in a fortnight. To suit you, we had to get new castings, and an article made under our own direction.

B. A. F. You were sent the catalogues.

F. T. V. The Orange bark and remittances are received. Your inquiries shall be answered in our next, if possible to get the information. In the meanwhile, see if you find nothing under head of Foreign News, in our last three and this No., to your purpose. The ink of your favor is so faded as to make it almost illegible.

T. A. & M. W. P. Plows, books, &c., shipped this day.

A Friend to the Prosperity of American Independence is received. We have referred to the article in question, but, as it is eight years since it was published, we should suppose, if the grass were so valuable as there represented, it would have come into pretty general cultivation by this time. Will "A Friend," &c., grant us an interview, as we are disposed to make his offered premium public. We have seen hemp in Kentucky, dressed and bleached so as to appear like the finest flax; and we are of opinion that it may be manufactured into the best of paper.

W. H. S. The four quires of paper shall be sent in a few days, with the printed figures on them.

C. & F. Engravers in this city are easily obtained, but artists to take sketches and portraits are difficult to be found.

SIDE-HILL PLOWS FOR SALE.

BARNABY & MOOERS'S Patent Side-Hill and Level-Land Plows can be had at the following prices, viz: No. 2, wt. 45 lbs., $8: No. 3, 70 lbs., $10; No. 4, 80 lbs., $10 50; No. 5, 90 lbs., $11; extra edges, 50 cents. For colter, if added, laid with steel, $2; and wheel, $1 50; shin-pieces, 12 1-2 cents.

We give a few of the premiums awarded this superior plow, viz: by the American Institute, at their plowing-match at Newark, N. J., in 1840, the 1st premium—a silver cup. Also, by the same Institute, at their Annual Plowing-match for 1841, at Sing Sing, N. Y., a gold medal, for the best work done, lightest draught, and best principle of construction, answering for "general purposes." The 1st premium of the American Institute for 1842, and the 1st at Philadelphia the same year, and all the premiums in Tompkins county, as well as that of the New York State Agricultural Society, which awarded it an honorary premium of $30, and equal to the 1st at their Annual Plowing-match at Syracuse, for 1841.

The following are its advantages over the common plow, viz: 1st. Ease of draught. 2d. Perfection of work. 3d. Strength and durability. 4th. All dead furrows may be prevented, as the furrows can all be turned one way. 5th. Any width of furrow may be turned, between 8 to 18 inches, by moving the catches in the cross-piece, toward the handles for a wide furrow, and toward the centre for a narrow one. 6th. Placing the beam in the centre of the cross-piece makes it a "*double mold-board plow,*" turning a furrow both ways at the same time; answering for green-ridging, plowing between corn or potatoes, or any crop cultivated in rows or drills, and for digging potatoes.

Orders for the purchase of Patent Rights, either by States or Counties, will receive immediate attention, and patterns of the various sizes furnished. Also, orders from Farmers, or others, for Plows, will be forwarded according to direction, to any place named, while the patent shall belong to me, if the money, or satisfactory references, are forwarded.

For further particulars, and cut of the plow, see Vol. 1 of American Agriculturist, page 370.

HENRY MOOERS.

Ithaca, Tompkins Co., New York.

WHEAT-SHEAF FARM ON STATEN ISLAND FOR SALE.

A recent domestic bereavement has induced the undersigned to offer his residence on Staten Island for sale. It is situated midway of the outer bay, on the sea-shore, eight miles from the Quarantine ferry, three from that of Rossville, and equi-distant from two others—Seguin's landing, and Port Richmond.

The condition of the Farm, the extent, value, and practical usefulness of the improvements, and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upward each, including an appropriate allotment of woodland; each division offering a moderately elevated building location. The condition of the soil is well known to be in the best working order.

Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product.

W. A. SEELY,
New York, Feb. 16, 1843. 218 *Fulton street.*

SHEEP FARM FOR SALE.

The subscribers offers for sale, or to let, their extensive Sheep Farm, situated in La Salle county, State of Illinois. The Farm consists of upward of 1,500 acres; over 400 being enclosed by substantial picket-fence, and improved; the balance, dry rolling prairie, and timber, most admirably adapted to sheep husbandry, for which purpose it has been used by the subscribers for the last two years successfully.

The Flocks of Sheep can be sold at the same time, if purchasers are inclined. They consist of over 1,500 good, strong, healthy, white-faced Cheviot breed; also, three fine Pauler Merino Bucks, purchased of a celebrated breeder at the east.

If the Farm can not be sold for cash, offers will be received for renting the same for two or three years.

Apply either to JOHN ROSE, Little Vermillion, La Salle, MURRAY & WARD, Chicago, Ill., or JAMES MURRAY & Co., Buffalo, New York; either of whom will give every information wanted.

THE FAST-TROTTING HORSE BELL-FOUNDER

Will remain at his old stand, Middletown, Butler Co., Ohio, the ensuing season. He is a bright blood bay, with black legs, mane, and tail; is 16 hands high, and weighs 1,200 lbs. He has trotted his mile in 2 m. 45 sec., and, as a roadster, is unequalled. Several of his colts, just beginning to appear, have proved equal to himself, and have sold from $150 to $1,200. This stock is well adapted to the saddle, road, or farm-work, and, for utility, nothing is superior to them. Address Dr. A. Campbell, as above.

Two 3-year old Stallions of Bellfounder's get for sale, very promising, and out of high-bred trotting mares. For price of these, address R. L. Allen, Buffalo, N. Y., or the Editor of this paper.

April, 1843.

COMMERCIAL GARDEN AND NURSERY.

The proprietors of this establishment have constantly on hand an extensive assortment, comprising every desirable variety of Fruit and Forest Trees, Ornamental and Flowering Shrubs, Roses, Bulbs, Dahlias, and a large collection of Herbaceous Plants, which they are prepared to dispose of on reasonable terms with a liberal discount to the trade, and to wholesale customers. European Privet, of a superior quality, for hedges, will be furnished at reduced rates. Also, Evergreens and Allanthus, the latter of a large size, suitable for street planting. 10,000 Norway Spruce of small size can be furnished at very reduced prices. Great care has been taken to select the best varieties of thoroughly tested fruits from the most correct sources, and it is the determination of the Proprietors to cultivate only those kinds which ample experience has proved to be of superior excellence, and to succeed well in this country. They are also particularly careful to take no innoculations of grafts from trees whose variety has not been ascertained aud accurately tested by the fruit itself—the only mode in their opinion, of ensuring perfect correctness. The varieties of fruit being thus kept entirely distinct, the Proprietors feel no hesitation in warranting the identity of the kinds, and they are persuaded that those who purchase cannot but be satisfied with the quality, both of the trees and of the fruit.

Catalogues with prices will be furnished gratis at either of the above places.

PARSONS & CO.
Flushing, L. I., near New York, 4th month, 1843.

Prince's Linnean Garden and Nurseries, Flushing, near New York.

The following new Catalogues, 32d edition, of this immense collection of Trees, Plants, &c., will be sent to every post-paid application, and orders will be executed with despatch.

No. 1. Fruit and Ornamental Trees and Plants.
2. Bulbous Flowers and splendid Dahlias.
3. Green-house Trees and Plants.
4. Garden and Agricultural Seeds, with low wholesale prices.
5. Wholesale Catalogues for Nurseries, comprising Trees of smaller size.

Feb. 28, 1843. WM. R. PRINCE & CO.

N. B. 150,000 Mulberry Trees, 4 to 6 feet high, of the finest varieties, for sale at low prices and liberal terms.

POUDRETTE,

Of the best quality, prepared by the New York Poudrette Company, may be had *immediately*, in any quantity, in barrels or in bulk, on application to the subscriber. Price, $5 for three barrels, or $15 for ten barrels, or 30 cents a bushel, if measured into wagons or vessels at the yard. Letters, post-paid, containing cash, will be promptly attended to, if addressed to

D. K. MINOR, *Agent*,
March 10, 1843. 118 *Nassau street, New York.*

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnston's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo, $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, $1; Downing's Landscape Gardening, $3 50; Do. Cottage Residences, $2 50; Liebig's Organic Chemistry, $1 25; Do. Animal Chemistry, $1; Buel's Farmer's Companion, 87 1-2 cents; Fessenden's Complete Farmer, 87 1-2 cents; Cobbet's American Gardener, 75 cents; Blacklock's Treatise on Sheep, 50 cents; The American Farmer's Instructor, $1 62; A Treatise on Cattle, $2 50; Dana's Muck Manual, new edition, 62 1-2 cents; Boswell's Poultry Yard, 50 cents.

The Young Mechanic, by the author of The Young Merchant—a book for every American Mechanic, well worthy the attentive perusal of all who desire to attain eminence in their profession. Price 50 cents.

D'Aubigne's History of the Reformation, complete in 1 volume, at 75 cents and $1.

Borrow's Bible in Spain, containing the most interesting incidents in the life of the author, during a residence of five years in the Spanish peninsula; 50 cents.

A Book for every American—Pictorial History of the United States, from the discovery of America by the Northmen to the present time, by John Frost, Professor of Belles Lettres of the High school of Philadelphia—embellished by upward of *three hundred* original Cuts, designed by Croome expressly for this work—now in progress of publication, and to be completed in twenty numbers, at the unparallelled low price of 25 cents each; the whole forming four octavo volumes.

Agents wanted, to whom a liberal discount will be made; also, for the American Agriculturist.

Several new Works on Agriculture have been added to our list, which will be spoken of more fully in our next.

The Publishers desire to state, that any orders for Agricultural, or any other publications which the market affords, will be promptly attended to, if addressed to 205 Broadway.

SAXTON & MILES.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, MARCH 30, 1843.

ASHES, Pots, per 100 lbs.	$5 12	to	$5 25
Pearls, do.	6 75	"	7 00
BARK, Quercitron, per ton.	22 00	"	24 00
BARLEY, per bush.	48	"	50
BEEF, Mess, per bbl.	6 50	"	7 00
Prime, do.	4 22	"	5 00
Smoked, per lb.	6	"	6½
BEESWAX, Yellow, per lb.	28	"	29
BRISTLES, per lb.	25	"	65
BUTTER, Table, per lb.	13	"	15
Shipping, do.	5½	"	10
CHEESE, per lb	5	"	7
CLOVER SEED, per lb.	5½	"	6½
CORN, Northern, per 56 lbs.	55	"	57
Southern, do.	51	"	53
COTTON, per lb.	4½	"	9
FEATHERS, per lb.	19	"	27
FLAX, per lb.	7	"	7½
FLAX SEED, rough, per 7 bush.	8 75	"	9 00
clean, do.	9 25	"	9 37
FLOUR, Northern and Western, per bbl.	4 75	"	5 00
Southern, per bbl.	4 25	"	4 75
Rye, per bbl.	3 25	"	3 50
HAMS, Smoked, per lb	6	"	7½
Pickled, do.	4½	"	5
HAY, per 100 lbs	52	"	56
HEMP, Russia, clean, per ton.	200 00	"	—
—— Kentucky, water-rotted, per ton.	165 00	"	180 00
Do. dew-rotted, do.	110 00	"	140 00
HOPS, per lb.	9	"	12
HORNS, per 100.	1 25	"	5 00
LARD, per lb.	5½	"	7
LEAD, Pig, per lb	3½	"	—
Sheet and bar, per lb	4½	"	—
MADDER, per lb.	10	"	13
MEAL, Corn, per bbl.	2 40	"	2 75
Corn, per hhd.	12 25	"	13 00
MOLASSES, New Orleans, per gal.	19	"	20
OATS, Northern, per bush.	32	"	34
Southern, do.	27	"	31
OIL, Linseed, per gal.	85	"	88
Castor, do.	62	"	70
Lard, do.	65	"	70
PEAS, Field, per bush.	—	"	—
PITCH, per bbl.	1 25	"	1 37
PLASTER OF PARIS, ground, per ton.	2 00	"	2 12
PORK, Mess, per bbl	7 37	"	9 50
Prime, do.	5 62	"	7 00
RICE, 100 lbs	2 13	"	3 00
ROSIN, per bbl	81	"	1 00
RYE, per 56 lbs.	55	"	60
SALT, per sack	1 40	"	1 62
SHOULDERS, Smoked, per lb.	4½	"	5
Pickled do.	3	"	3½
SUGAR, New Orleans, per lb	4	"	5½
TALLOW, per lb.	6¾	"	7
TAR, per bbl.	1 25	"	1 37
TIMOTHY SEED, per 7 bush.	15 00	"	16 00
TOBACCO, per lb.	3	"	7
TURPENTINE, per bbl.	2 50	"	2 75
WHEAT, Western, per bush.	90	"	95
Southern, do.	81	"	90
WOOL, Saxony, per lb.	30	"	37
Merino, do.	27	"	30
Half-blood, do.	22	"	26
Common, do.	18	"	22

New York Cattle Market—March 27.

At Market, 1,000 Beeves (660 from Pennsylvania); 100 Cows and Calves; and 900 Sheep.

Beeves.—The advance of last week is fully sustained; and we quote to correspond—retailing cattle $5 75 *a* $6 75, with a very few extra, at $7; inferior to fair, $3 50 *a* $4 75. 100 unsold.

Cows and Calves.—Sales of 90, at $15 *a* $20 to $25 *a* $30 each, according to quality.

Sheep.—All at Market taken at $1 25 *a* $2 25 to $3 50 *a* $6 50 for a few extra wethers.

Remarks.—Money as abundant as ever, and specie a real drug—the Banks discounting all good paper that they can get hold of, at 5 to 6 per cent. Stocks of a first-rate character are still advancing. U. S. loan, 6 per cent., which was dull three months since at par, now sells readily at $107. New York 6 per cent. is worth $103, and 7 per cent. $104.

Cotton is very firm, notwithstanding the further decline of ⅛d. in England. Instead of being 2,800,000 bales, as estimated early in the season, many think, now, the past year's crop will not exceed 2,500,000 bales.—Flour and Meal, we have quite a reduced stock throughout the States, and sales are effected at 12 to 25 cents per bbl. higher than last month. Grain, also, is scarce, and an advance has taken place.—Molasses is firm.—Provisions in good demand. It is estimated, that of the $2,000,000 worth of pork, bacon, and lard, put up at Cincinnati the past season, one fourth the amount was for the English and French markets direct.—Sugar is dull.—Tobacco quiet.

The Spring, thus far, is the coldest and most backward within our recollection. Snow is still upon the ground all around, and we are apprehensive that the immense bodies of it at the north will make late frosts, and endanger the coming corn crop. We advise the farmers to plant early varieties as much as possible, and hold on upon their produce for better prices; for we can not expect the coming season to be as favorable as the past was. Business generally, upon the whole, looks more encouraging than it has for some time.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

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The Subscriber will attend promptly to the execution of all orders for the purchase of stock, seeds, agricultural implements, and books. He has been more or less engaged in mercantile pursuits in this city for ten years, and has an extensive acquaintance and thorough knowledge of business in general. Cash or produce must invariably be in hand, before the order can be executed.

A. B. ALLEN, 205 Broadway.

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

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A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

CULTIVATION OF THE SUGAR-BEET.

We have no idea that it will ever be worth while to cultivate the beet in America, for the purpose of making sugar; but as a table esculent, and especially as food for stock, we have found it on certain soils, the most profitable root that can be grown. Although it has been extensively cultivated for the last half century on the continent of Europe, its value in husbandry has been singularly overlooked in England and America, and it is not till within the few past years, that it has become one of the general course of root crops. The cultivation of the sugar-beet is now rapidly on the increase, since public attention has been more particularly called to its merits, by a series of experiments made by Earl Spencer and other distinguished agriculturists, on its comparative value with mangold wurtzel, and turneps, in feeding stock; the beet, so far as our information extends, having invariably proved much superior to the two latter roots in nutritive qualities. In addition to its greater value as an article of food over turneps, its yield is equally large, if not larger, acre for acre; and on account of the destructive ravages of the fly, it is a much more certain crop. Mangold wurtzel is an inferior variety of the beet, and a *coarse tasteless* root, and wherever it can be cultivated, the sugar-beet succeeds quite as well; the latter, therefore, should invariably take precedence over the former, and leave it to become extinct, since it is so inferior in quality to the *improved* beet varieties.

Latitude of Cultivation.—Beets may be grown from the equator as far up as the 45th degree of north latitude, but from 39 to 44 degrees is their best range in America. Farther north than this it does not ripen well, and to the south it is subject to be injured by the blister-fly and grasshopper; the summers also are too long and hot for it as a winter crop, and corn and potatoes answer a better purpose; still, if planted as early as garden vegetables in the southern latitudes, it may be brought forward for green food for the stock, about the time that grass gets parched up and fails, and thus answer a very good purpose. We think beets might succeed well among corn, planted sufficiently wide apart to admit a row of roots in the centre. In this case, the corn would protect the beets from the too scorching rays of the sun at the south, and we should think add to their juiciness and sweetness by the shade of the stalks.

Soil.—The best soil for the production of the beet, is a deep, light, and moderately rich loam, resting on a clay subsoil; yet, as it has the power of drawing much of the food necessary to its growth from the atmosphere, by means of its large leaves, it will do very well in thin sands, a leachy gravel, or hard clay; a good manuring, however, on such soils would be essential as a preparation for the crop, and frequent stirring of the earth during its growth. A very rich soil, such as the deep alluvials of our river-bottoms, is not a proper one for beets, inasmuch as the roots grow too large and rank in it, and are consequently coarser and less nutritious, and do not abound with as much saccharine matter, as is found in those growing on poorer soils.

PREPARATION.—Plough deep, and roll and harrow the land fine, and throw it up into beds about one rod wide, and if the subsoil be at all tenacious, have the furrows between the beds well hoed out, so as to drain off all falling water.

KIND OF BEET.—The white Silesian is the best variety which we have cultivated, it being the sweetest and finest grained of all others, and to these good qualities, it joins that of producing an equally large crop.

PREPARATION OF SEED.—It is essentially necessary that the seed be soaked *at least three* days previous to planting, and if it be a whole week, it is no matter. This should be done in soft tepid water; and just before planting, roll the seed in ashes or plaster of paris, so as to prevent their sticking together, and facilitate the sowing. The beet seed has a thick, hard pericarp or shell, and till this softens and breaks, it is impossible for it to vegetate; and unless one can be sure of wet weather immediately after sowing, it will frequently not come up at all, or be so long about it, as to be the means of losing half the crop.

PLANTING.—The beet may be sown broadcast like the turnep, but as weeds are likely to spring up in most soils and prevent its growth, and the labor of exterminating them is much greater in this way, it is preferable to sow in drills. For this purpose, the drill-barrow may be used the same as in planting the ruta baga, but the beet-seed is much more difficult to deliver evenly through a small aperture than the turneps, and though we have used a great variety of barrows for this purpose, we have never yet had one that worked well and could be depended upon, especially in tenacious or heavy loamy soils. It is preferable, therefore, to take a piece of joist four inches square, or a round stick of the same diameter, half or just as long as the lands are wide, fill this with iron or wooden teeth in wedge shape, as far apart as you wish to have the rows, put a pair of fills to this, and hitch on a stout man or steady horse, and passing once or twice over the land, completely drills it from one to two inches deep. Then follow immediately with the seed, dropping it by hand, or from a long necked bottle, or tin cup with a hole in the bottom, and a handle attached to it, shaking the cup or bottle as you walk along, and following sharp with the eye to see that the seeds are evenly dropped. Faithful children of ten years old, can do this with more ease and facility than grown persons. As fast as dropped, cover with the hoe; in heavy soils about half to three fourths of an inch deep, in sand or light gravel twice this depth.

The rows may be from two to three feet apart for a field crop—two and a half to three feet is the best. This distance enables one to use the cultivator for weeding, without danger of cutting or covering the plants by the dirt being thrown up as it passes through the rows. The product is not so great per acre from wide rows, but land being cheap and labor dear in America, we must study to facilitate manual operations, at the same time that we have some calculation to a good yield. Four pounds of seed per acre is generally considered enough, but it is better to have a dozen extra plants to thin out, than to be obliged to transplant one. Those transplanted do not thrive half as well as those that remain where they vegetate; besides, the labor of so doing is more expensive than extra seed and time of thinning. We therefore mean in sowing to have a good seed dropped as near as every two or three inches in the drills.

AFTER CULTURE.—As soon as the weeds begin to appear, run the cultivator through the row and follow with the hoe. It is very essential that the ground be kept clear of weeds, especially for the first two months, and three hoeings with the use of the cultivator are generally sufficient for the season. As the plants attain a height of about three inches, they should be thinned to a distance of about four inches, leaving the strongest and healthiest; then during the season as they grow, gradually thin out the remainder, leaving the roots in the rows at least about nine or ten inches apart. If left too thick, they shade and choke each other in growth, and the product is not so great as when well thinned. These thinnings are valuable to feed to stock during the summer, and are frequently considered equal to half the expense of the cultivation of the whole crop.

HARVESTING.—When the leaves begin to decay and turn yellow, is the best time to gather the beets, for if left longer than this in the ground, the roots grow hard and strong, and do not yield so great a per cent. of saccharine matter. This of course will take place earlier or later in different climates, and is undoubtedly as good a rule as can be given, it being adopted after a strict chemical analysis of the beet in its various stages of growth. If the soil be light, as the roots generally grow so much out of the ground, they can be pulled up by taking hold of the tops with the hand—but if more tenacious, the dung-fork is the best instrument that we know of for digging them. Let part of the hands be at this operation, and the other part follow with large knives or bill-hooks; taking up the root with one hand, top off the leaves with the other, and toss the roots into small heaps to dry through the day, and if left out over night and there be danger of frost, let them be lightly covered over with leaves or straw; a hard frost injures the roots, and makes them more liable to decay. They may then be taken to a well-ventilated cellar, or be pitted in heaps of 100 to 200 bushels. The beet is rather apt to heat and commence sprouting if thrown into large heaps, or packed away in the cellar. If put in the latter place, any other roots except the turnep may be placed at the bottom, and the beets on top, and if in pits the same roots or straw in the centre. All the beets then have a good ventilation, and an opportunity of throwing off the impure air; and to facilitate this, after covering the heaps with dirt, holes should be made every few feet on the top of them, and wisps of straw be placed in such holes. In this way we have experienced no loss or deterioration in the value of the root, but have preserved them till May, as fresh, sound, and sweet, as when first taken from the ground the preceding fall. In a climate as far as 39 degrees south, they might be preserved all winter in tolerable tight sheds and barns.

Feeding.—Throw them on to the ground or floor, and take a hay knife or spade, and a man will slice up a bushel a minute sufficiently fine to prevent cattle choking on them. The best way to cook them for stock is by steaming, but they can not be kept so over two days in warm weather, and a week in cold, without undergoing a fermentation, and losing the saccharine matter so grateful to the taste and so essential to nutriment. Either raw or cooked, stock frequently prefer them to meal or corn. Raw, we think them as nutritious as any root whatever, and as far as our experience extends, three bushels of beets with neat stock, is equal to one of Indian meal. Hogs demand less bulk to fill themselves than cattle, and perhaps their value to them would not be in as great a proportion.

Product.—Four hundred bushels is a fair yield in field culture, but six or eight hundred per acre is about as common. We have grown at the rate of 1,300 bushels to the acre on a hard clay soil, and our average field product is usually 600 bushels. We have heard of 3,000 bushels being produced to the acre on rich loams. The roots will frequently weigh from 17 to 20 pounds each, and 10 pounds is not unfrequent; now admitting this last weight to each root, and that seven rows stood in the width of a rod, which would make them about two feet apart, and the roots one foot apart in the rows, and allow 60 pounds to the bushel, we should have the enormous product of 3,080 bushels to the acre, but roots so large are coarse, stringy, and not unfrequently hollow, and have much less saccharine matter in proportion to their bulk, than smaller ones. Those of about 5 pounds weight are far superior; and these standing one foot apart in the rows, and five rows in the width of a rod, making them about three feet apart, give the large yield of 1,100 bushels per acre, which is quite as great a product as it is desirable to strive for, and upon the whole, perhaps the most profitable.

Raising the Seed.—There is as much in choosing proper roots for this purpose, as in selecting animals to breed from, and the same general rule holds good in both cases—a medium size and fine true form. Roots weighing four to six pounds, and of four to six inches diameter at the top, and nine to thirteen inches long, and smoothly and evenly tapering to a point, without straggling branches, and of a creamy white color and smooth grain, are the most desirable. "Like produces like," and with such selections followed up, the crop will soon run evenly of the same shape and size as the roots from which was grown the seed. Plant out the seed-roots about the 1st of May, three feet apart; and as the stalks grow, set small stakes round them in a circle, and tie a cord from stake to stake for their support. When the seed shells easily, which if planted in May, will be in September, is the proper time to gather it. It ought to be spread out a few days on the floor of some high, dry room, or on boards in the sun till well dried; it may then be packed away in boxes or barrels, or be put up in bags. We have generally found this essential to a proper preservation of all seeds. If not well dried before packing, they are apt to heat and mould, and lose their germinating powers. Two or three dozen roots will grow seed enough for acres, and at one tenth the cost usually asked for it at the seed-stores. When grown at home, one knows what he gets, and as it comes to him abundantly and cheap, he can, without grudging, give to his neighbors, and thereby greatly promote the culture of this most valuable of roots.

A RURAL WALK IN THE CITY.—No. II.

Nursery of Mr. Reid, on the Fourth Avenue, between 34th and 48th Streets.—These are charming grounds, situated on Murray's Hill, and command one of the most delightful views to be found on the island; and very sorry were we, that the vegetation was not sufficiently advanced, to show the scenery to proper advantage—but we shall make amends in future visits for all this. The grounds contain 12 acres, are in form of an oblong square, and are enclosed by a good honey-locust hedge and stone walls. The soil is of a clayey loam, and is particularly well adapted for a healthy growth of trees and shrubs. The walks cross each other at right angles, and the borders all along the principal ones are planted with flowering shrubs, which will soon be in bloom, and continue so in varied succession during the whole season, thus making them the most delightful of promenades.

The nursery part is well filled with the various kinds of fruit-trees common to our country, and we were informed that it is particularly rich in all the new varieties of pear and plum, which are found quite superior to the older sorts. Mr. Reid devotes most of his time to this department; attending personally to all the budding and grafting, and will guarantee for the correctness of what he sells; for he has specimen trees in bearing of all from which he cultivates, and this is certainly the only safe method for any nursery-man to pursue, to be certain that what he sells is precisely the thing represented. Frequent mistakes have hitherto been made by some, which have given much dissatisfaction, and been the means of preventing many an after order, of fruits, shrubs, and flowers, in consequence of such disappointments to the purchasers.

We found Mr. Reid busy in making experiments from seeds of different kinds, and from these he has growing some quite distinct varieties of the Isabella, and Catawba grapes, which he expects will bear this season. He has also a number of seedling cherries, and has raised a curious variety of the peach, growing only about two feet high, with branches drooping to the ground like a weeping willow. It has not yet borne fruit, and he merely mentioned it to us as an ornamental tree, and only recommends its cultivation as such, till he ascertains what it will produce. The ornamental trees and shrubs are of numerous varieties, and of suitable sizes now for transplanting as shade trees in the streets and parks, or private grounds.

The green-houses here are five in number, making ranges altogether, of 280 feet. They are well stocked with the usual variety kept on sale for the New York market.

Green-House of Mr. Ball.—Crossing from Mr. Reid's over to the Bloomingdale road, we found Mr. Ball prettily situated with an acre and a half of garden ground around him, and several long ranges of green-houses in fine order. All these have double roofs, which Mr. B. prefers in consequence of their giving more heat and light than the single roof, and at a time when most wanted One of these conservatories is about 20 feet wide. and 125 feet long, and as we entered, it presented a most splendid and gratifying sight in the flower way, for it showed a wide centre row, and two deep side ones, running the whole length of the house, and filled entirely with masses of magnificent Camellias in full bloom. In another range 75 feet long, we found quite a variety of other plants, prettily arranged, and as well as we are capable of judging, cultivated with care and attention.

Nursery and Green-House of Mr. Mantel, 46th Street.—Just below Mr. Ball, on the same road, are the fine grounds, embracing four and a half acres, of Mr. Mantel, recently settled here from France. He imported most of his fruits from the best nurseries in Europe, and among others, a great variety of pears from the celebrated Van Mons, in Belgium. These are generally grafted on quince stocks, and come forward much sooner than in the ordinary way, but of course are not so long lived. To those who want their fruit quick, or standards for grafting, we would recommend the dwarfs of Mr. Mantel. He exhibited nearly seventy varieties of pears at the Fair of the American Institute last October, and was quite successful in obtaining premiums. We like the pyramidal form of training trees adopted here for small gardens, as they take up much less room than the usual way; and we are of opinion that the fruit they bear is better, though this may be a matter of mere fancy. We should think there were ranges altogether of at least 250 feet of glass here, and the most numerous shrubs we found in them, were roses and oranges. One entire range was devoted to the latter, principally of the dwarf kinds, and such as are most suitable for parlor cultivation.

Garden, Nursery, and Green-House of Mr. Hogg.—Pursuing our course towards the city, we soon came to one of the oldest and most favored establishments in New York; for well do we recollect, when residing on Bowery Hill years gone by, of often wandering here, and over the picturesque grounds in the neighborhood. It was then a charming country spot all around, and many are the happy hours we have spent with those whom we shall never see again in this world, gathering wild flowers in the meadows, and beautiful cultivated ones in Mr. Hogg's garden. Now the populous town has advanced almost over the whole of this space, and the neighborhood is completely disfigured by newly-opened streets, the digging down of charmingly rounded hills, and the filling up of wild ravines, bringing everything to a general level for the purpose of building. We like to see our country increasing in population and wealth, but it makes one melancholy to wander over the favorite scenes of boyhood, and witness the horrible cutting up and devastation, that such "improvements" make among them. Yet they put money in somebody's purse, and this is the all-engrossing thing, now-a-days, so we suppose we must not complain.

The corporation has so plundered Mr. Hogg's grounds in the way of streets, that he has barely one and a half acres of land left for his garden. His ranges of glass, however, are extensive, full 350 feet in length, and abound with a large collection of shrubbery, flowers, and herbaceous plants; comprising all the well-known old sorts, together with anything new and fine that may be introduced into the country. This article is already extended to so great a length, that we can not particularize, and merely mention the appearance and size of a Franciscea undulata, standing four feet high, and in full bloom. In addition to these grounds, Mr. Hogg has ten and a half acres at Yorkville, a few miles from the city, full of all sorts of shrubs, and fruit and forest trees. Of the fruit-trees, Mr. H. has planted out quite a number, on purpose to test the various specimens which he cultivates.

SEED-STORE AND CONSERVATORY OF MR. BRIDGEMAN, ON BROADWAY NEAR 18TH STREET.—After Mr. Thorburn's and Mr. Smith's, this is the oldest establishment in the city; and it may be sufficient for us to say, that it abounds with a fine variety of all such things as may be wanted in this line. Roses and geraniums are the chief ornaments of the conservatory, of which there are two hundred varieties of the former, and sixty of the latter. We saw a fine Chorozema, a rare plant from Central America, and could not but admire the bright blending of the orange and red in its charming flowers.

Mr. Bridgeman is quite an author, having published several works on Horticulture, and the management of green-house plants, which he was so kind as to present to us. These volumes are eminently practical and worthy of public confidence, and we respectfully recommend them to the attention of our readers.

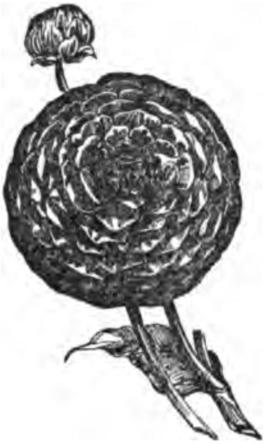
GREEN-HOUSE AND GARDEN OF MR. MONK, 4TH AVENUE AND 30TH STREET.—We neglected at the proper place, to speak of Mr. Monk's flower-garden and conservatory, which we found just this side of Mr. Reid's nursery. These he has recently somewhat enlarged by the addition of two lots, and 50 feet more of glass; making his surface now under cultivation about one acre, and the whole range of green-houses at least 400 feet. He has about 4000 camellias, and a large supply of geraniums, heliotropes, verbenums, and roses. Many of these last were in full bloom when we visited the establishment, and made a fine display, especially the beautiful, rich red Agrippina or cramoisie supérieure. We also much admired the yellow tea rose, though we do not know why it should be called *yellow*, for it much more resembles a light cream color. These shrubs are of large size, and were full of buds and flowers, and we took good care to appropriate to ourselves a fine bouquet of them and the Agrippina.

Mr. Monk has recently made the experiment of grafting numerous varieties of the tender foreign grapes upon Isabella stocks, and is cultivating them by the inarching system. The reason for grafting these foreign sorts upon the Isabella is, that the latter is a hardier stock, and flourishes better than the former on a wet or poor soil. The green-houses here are built with span roofs; that is, with glass on both sides, and are preferred for the same reason as stated by Mr. Ball, and they save much in bottom heat.

In the garden we noticed the native rhododendrons, flourishing finely in the open air. They are planted on the north side of a high fence, and have a line of houses beyond to break off the wind; and thus protected from the hot sun of summer, and the cold blasts of winter, they grow well, and flower abundantly. It is a magnificent shrub, and we wish more attention was given to it, not only in the native, but in the improved hybrid varieties. One ornament of the garden we found here that we have no recollection of before seeing. It is a succession of boxes with soil in them, placed one on top of the other, gradually lessening in size, and thus forming a sort of pyramid. From these may be seen ptunias and verbenums completely enveloping the stand, and in full flower all summer—thus forming a charming embellishment to the grass-plot or border.

It was now quite dark, and thus ended the Rural Walk in the City. We have doubtless omitted to mention several establishments unknown to us, and if so we shall be pleased to have our attention called to them hereafter. Sufficient, however, we trust, has been said, to give the reader who may have had patience enough to accompany us in our long ramble, an idea of the extent of the nurseries, gardens, and conservatories, in the vicinity of New York. We shall have something to say in our next of the fine farms in this neighborhood, several of which are cultivated on the most approved principles of scientific agriculture, and are models deserving the study of all engaged in these pursuits.

THE DAHLIA.



(Fig. 7.)

As May is the season above all others of flowers, we have thought we could not do a greater favor to our fair friends, the ladies, than to introduce to their notice the dahlia; which if it were fragrant like the rose, would at once become the queen of flowers. It was first discovered in 1789, by Baron Humboldt, then travelling in Mexico, and sent by him to Europe, whence it has been disseminated over the whole civilized world. It is of large size, and of every variety of color, from the pure white up to the deepest purple. It may be propagated either by seeds or roots, and some assert successfully by cuttings from the lower part of the stem. We have only tried the two former methods of growing it, and in these we have been quite successful. It is a hardy plant, and has done best with us on a soil of rich clay loam, and during those seasons that moisture and cool weather most predominate. We found the dahlia usually of a larger growth in England than in our own country; but whether owing to the superiority of the cultivation there, or the greater humidity and coolness of the summers, we were unable to decide. We suspect, however, that both of these causes had their effect in adding to the size of this magnificent flower.

SHADE AND ORNAMENTAL TREES AND SHRUBBERY.

These delightful appendages to our dwellings, farms, and towns, we are of opinion will never be out of fashion so long as civilization exists among us; and as they are so easily propagated, and in this country so cheaply and readily procured, nothing short of a want of taste, or absolute sloth, will prevent *the proprietor* of his estate, be it either a city or village residence, or the more ample domain of a farm or plantation, from their culture. No exotics which have yet been introduced into our country are superior, if at all equal, to the indigenous forest-trees of America. The Elm, the Maple in all its varieties, the Sycamore or Button-wood, the Oaks of the northern and middle states, the India-tree, the Cotton-wood, the Magnolia, Cypress, and other trees of the south, to say nothing of the numerous lesser, yet equally beautiful varieties scattered all over the country, are not surpassed, if indeed they are equalled in any quarter of the world.

There are few objects we more admire than a beautiful tree; and we had any time rather set one out, and give it a good start and a kind blessing, than to eat—unless by accident we may have previously pretty long fasted; and as the proper season has approached in which they should be planted, we propose to give a few plain directions on the subject.

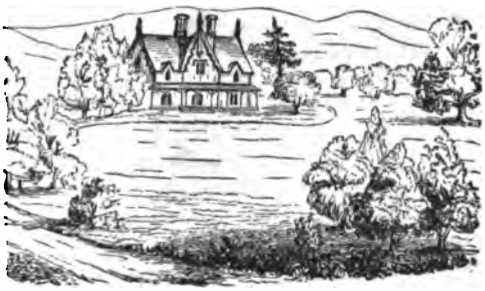
The Selection of the Tree.—If not grown in a nursery, they should always be taken from the open ground where they have come up in a second growth, and become inured to the sun and wind, and drought. If such are not to be found, it may be as well to let them alone, for a tall spindling tree from a dense forest will not grow. In raising them from the earth, care should be taken that the roots be as little bruised and torn as possible, and if the soil incline to adhere to them, let as much of it be attached as convenient. Do not suffer them to remain any length of time out of the ground; but if this can not be prevented for some days, let them be well covered from the sun and wind, and kept moist. Let the holes, wherever they are to be set, be dug as broad as a large wagon-wheel, and at least two feet deep. No matter if it be a little more labor, it will doubly pay the expenses in the increased growth of the tree in two years. Then throw in some good earth for a bed on which the roots are to rest, and if that thrown from the hole be not rich enough, let some be brought from elsewhere. Good rotted sods on top soil is the best; by no means use *fresh* manure, for good earth is better than any manure, even if well rotted. Fill the hole for the tree sufficiently high with earth, so that when planted it will stand as deep as before it was removed, or at any rate not more than two inches deeper. Before setting it out, cut off the bruised and mangled roots, and thin out the top moderately, and shorten the branches so as to give it a well-fashioned head; but by *no means* cut them off altogether, unless the stem be long, and the top so high as to endanger its being blown over; in which case nearly or quite the whole top may come off. This, however, is a bad practice, and always retards for some years the growth of the tree, and frequently is fatal to its life if it be large; short and stocky trees, therefore, are the best, always having roots in proportion to the head.

When the tree is properly trimmed, stand it upright on the soft earth prepared for it in the hole, and let a hand with a shovel throw in a light covering of good earth upon the roots. Sway the tree gently back and forth to settle the mould among the roots, and when finished, tread the ground firmly around the trunk. Then lay the surplus soil well up, flatting the top like a basin to hold the rain that may fall, or the water that you may place there to save it from drought; finally, stake and protect it, if necessary, and you will not lose one tree in twenty that is thus planted. The extra labor thus expended is not equal to taking up the dead trees, and replacing those that would otherwise die from careless or insufficient planting; and besides, your trees will gain rapidly on the otherwise poor, stunted, and feeble things that are set in the usual method. Last spring we planted thirty-two sycamore or buttonwood trees in this manner, on a hard and hungry clay soil, with good fresh earth brought in and placed about the roots. The trees were about three inches in diameter near the root, and every one lived and made more or less healthy new wood during the summer, although it was a season of severe drought, and no water was carried to them. The whole expense of taking up the trees, and digging the holes, and planting, was less than thirty-five cents each. On these principles of digging up and planting, fruit-trees and shrubbery of all kinds may be removed with perfect success. We have transplanted hundreds, and when carefully done, with little loss; and if these simple rules are followed, three fourths of the trees now annually lost from careless planting, would be saved, and make a rapid growth. If any one doubt the superior efficacy of this method, let him try it side by side with the plan usually practised, and he will be convinced of its superiority.

Several friends who have been building fine and costly houses in town, with ample enclosures in front, and who have annually planted shade trees in them for several years, wonder why they do not grow! We have told them; but they are too careless, or do not give sufficient attention to the subject to understand it, and still they continue to repeat the old process. It was only the other day in passing one of their places, we saw a hole dug, and a man with a large, long, spindling tree on a cart, with a great ball of earth *froze* to the roots, which were cut off all round to *fit* them to the *capacity of the hole*—not the *hole fitted to the roots*, and a long sweeping top. Very well, we thought, go on and plant it! but two to one the tree will die; yet the experiment will probably be repeated again, for years to come, as it has been for years past, at the rate of a dollar per tree, until the exhausted proprietor exclaims in his despair, that the worthless soil will never *bear* shade trees!

COTTAGES.

We here give two cuts of cottages, one in the plain, and one in the ornamental style. We do not subjoin the ground plans, because every one in building chooses to have his own arrangement of rooms, calculated for his own particular locality, comfort, and convenience. Figure 8 we most admire. It is something like the tasteful English cottage *orné*, a style of building which we hope hereafter to see scattered over the country, if for



(FIG. 8.)

no other reason than to give variety to our architecture. We think the large ample roof particularly necessary in our hot climate, to shade the walls and windows from the fervid sun. It is also the best roof to throw off the deluging rains that frequently fall here, and it assists greatly in keeping the walls dry, no small comfort in country houses, especially when built of stone or brick.

(Fig. 9.)

But as we have expressed our opinions pretty freely on this subject this month, under head of Editor's Table, in noticing Mr. Downing's late publications, we will not enlarge at present. We hope, however, in planning for country residences, more attention will be paid to the grounds that surround them; for we think, so far as ornament is concerned, these are of more consequence than the family residence itself. What can be more incongruous than a fine house, standing naked and alone, on rough, uneven ground, destitute of verdant shade and shelter, and surrounded by a miserable coarse fence? We prefer a log hut, with basswood chinking and mud plaster to such, for then everything is in keeping.

MANAGEMENT OF BEES.

We have had some experience in bees, and spent many agreeable hours watching their habits and movements, and always found ourselves wiser if not richer in the result of our observations, besides enjoying the sweets of their labors. We have also seen and read many treatises on this most intelligent and curious of insects; written with much ingenuity and patient research, yet to be frank, we confess that we are not altogether settled in opinion as to the best plan to pursue in regard to them. There are certain rules, however, to be observed, without which no one need expect to succeed well as an apiarian, even in propagating bees, if he *destroy* them to obtain the honey. The situation in which the hives are placed should be dry, pleasant, and shady. If in a bee-house, it should be roomy and well ventilated, and open to the morning sun. The hives should be made of thoroughly seasoned pine, basswood, whitewood or black walnut planks, not less than one and a half inches thick. This is necessary in our northern climate to keep up a regular and proper temperature, avoiding thereby the extremes of heat in summer, and cold in winter. It is said, too, by many apiarians, that bees make their comb during the night; and if so, the hive should be thick enough to retain the mild temperature of the day, through the chills of night-fall. Let the hive be put as close together as it can be, to prevent the bee moth from depositing its eggs or nit in the crevices, for these are sure destruction to the swarm. The size of the hive should be about that of a bushel, or to measure inside a cube of 14 inches.

This is our starting point, whence we may branch out into a dozen different models of hives; some with the drawer, or box plan of Mr. Weeks: others with adjoining apartments like Dr. Thatcher's; others still, with a subtended contrivance according to Mr. Affleck. Again, the house, or colony method has had its advocates—while many, and those by far the most numerous, insist that the *old* way of keeping bees in a crazy house, or no house at all, but anywhere on old benches, stumps, or stools, in a rickety open hive, either of wood or straw, and to murder the bees with brimstone, and rob them of their honey, is the best of all; this last, however, we do not subscribe to. Were it not for the bee-moth, little trouble would be experienced in propagating bees in either of the methods mentioned; but as that affliction to the apiarian is universal in our country, no successful course can be followed, unless, we guard effectually against its ravages.

Our experience impels us to lay down this postulate: that but one queen or mother bee can exist in any one community for any length of time, and therefore, that the swarm can be only augmented from the increase of this female. It follows then, that if the colony be overpeopled, or very numerous, it can not increase above its existing size; for the queen, or her successor can lay but so many eggs, and that number can only keep good such as are lost by accident or die naturally in the colony. Of course the chamber or house plan can only grow to a given size, and never swarm. This plan, too, is otherwise objectionable, as being the least productive and profitable method; liable to occasional accident, or loss of the whole, beside the depredations of the moth, which will, maugr all preventives, and no matter what the situation, without continued personal attention, be at once among the thickest of the hive. All this we have proved over and over again. This system, therefore, after a thorough trial, we dismiss as unprofitable and hazardous.

Our preference is decidedly for the smaller hive. In the exact fashion of this we are not particular, so that the above-named requisites, viz., warmth and tightness be secured. We may also add, that we prefer entire simplicity, for bees do not understand complex habitations. But as the discussion of the different modes of treatment, and manner of taking the honey, will lead us into an elaborate essay on the whole subject of the domestic habits and economy of the bee, we must defer it till a future time, promising, however, that we will duly introduce to our readers the best information we have at hand. In the mean time we shall be glad to receive communications from those who have had experience on the subject.

Tour in England. No. 13.

EARLY LAMBS.—Among the table delicacies that the wealthy part of the population in this country greatly relishes, and seems very willing to pay for, are meats somewhat out of season; and the kind which is supplied with the most care and abundance, and that is most permanently relied upon in market, is early lamb. The breed of sheep for a long time exclusively used to produce this was the Dorset; deriving their name from the shire in which they were indigenous, and where we understand the business of this early breeding first commenced. The production of early lambs now is no longer confined to Dorsetshire, or its peculiar sheep, but it has become quite common throughout the southern counties of England. Among other breeds used for this purpose, the South-downs are the greatest rivals of the Dorsets; and we must confess, that we think them possessed in a superior degree of those qualities best adapted to early breeding.

The Dorset is a delicate sheep, and horned; with white face and legs; flat, thin carcase, and rarely weighs over 75 to 80 pounds dressed, when full grown, and the wethers do not fully mature till two and a half or three years old. Its fleece also, is of light weight, and the wool not above a middle quality. Its meat is pronounced superior. We may be unfortunate in our taste, yet in no instance did we find it to excel the well bred South-down when raised under equally favorable circumstances. The South-downs, then, being hornless, hardier, of better shape, and maturing equally quick, in breeding early lambs for our own country, we should much prefer their introduction for this purpose to the Dorsets. It may be thought that the South-downs would not take the buck equally early; but the contrary is the case, for they can be brought to it without the slightest difficulty, as the breeders in Middlesex and Berkshire informed us, and they are now quite successful in the production of early lamb, and for a preference retain the South-down breed.

The usual period fixed upon for the ewes to lamb for the early market, is during October and November. They are then ready for the butcher about Christmas time, and so continue during the whole winter. They are usually killed at eight to ten weeks old, their meat being considered the most delicate at this age. When they first appear in market they bring extravagant prices, sometimes as high as 4 or 5 guineas, and never less we believe, than 30 shillings to 2 guineas each, which would be equal to 50 cents or 1 dollar per pound for the meat in our money, which upon the whole, amply pays the breeder for his extra care and expense in rearing these delicate house lambs.

Previous to parturition, the ewes are usually taken up, especially at night, and during rain storms, and kept in well littered folds or yards. After lambing they are driven out every morning to the pasture, and brought back in the afternoon, and thus remain with their young till the next morning. If the ewes are turned out quite early in the morning, they are brought home to suckle at noon, and then again in the evening to remain all night. In addition to their pasture, they have what green food they will eat during the time they remain in the fold-yards; such as clover, vetches, and rye-grass. As soon as cold weather approaches, and they can no longer run in pasture, in order to keep up a full supply of milk in the ewes, they are high fed with the best of hay, turneps, or other roots, and brewers' grain. The lambs also are taught to drink cow's milk as soon as they can make them, and the quantity of this that they may safely take after they are a month old, is about one pint a day. This brings the lambs forward much faster than when dependant upon their dams alone for their nourishment, for it not unfrequently happens by this process of feeding, that they are ready for the butcher at the early age of six weeks. To ensure greater certainty in rearing these lambs and accelerate their growth, it is best to have them comfortably sheltered in houses. These are airy and well littered, and so roomy that the lambs can frisk about in them, and take all requisite exercise. This is not only necessary for their health, but ensures a better quality of meat. Any animal kept in close confinement during the fatting process, is sure to be attended with more or less fever, which injures the quality of its flesh, and often makes it positively unhealthy.

We have often thought that the rearing of early lambs for our own markets in the United States, might prove a profitable business to those who would engage in it, especially on the Atlantic borders from New York to Maryland. This section of the country enjoys a tolerable mild winter climate, and embraces within its boundary three large cities, besides several populous towns, the inhabitants of which are both able and willing to pay a good price for delicate meat, which is brought there somewhat out of the ordinary season. Lamb does not usually appear in the New York market till April, and even then it is of an indifferent quality; and yet it sells readily for one dollar a quarter, equal to 15 to 20 cents per pound, and even when more plenty in May, it is worth full 10 cents per pound. Surely these prices would pay our breeders well for a little extra attention in providing this wholesome and delicate meat for our markets. We now have a good many Southdowns scattered over different parts of the United States, and they can be obtained at moderate prices; and for the production of early lambs and good mutton, we would especially commend them to the attention of our countrymen. Those who can not afford to purchase a flock of full bred, may at least procure bucks, and by judiciously breeding them to native ewes, they may soon possess a very useful sheep, and the right sort to give us choice mutton and delicate early lamb.

THE TIMES, AND PROSPECT OF THE PRICE OF AGRICULTURAL PRODUCTS.

In the January No. of this paper, we gave a short article on the prospects and price of agricultural products, and a few reasons which induced us to believe, that there would be a rise in their value; and lest some of our readers may not have the number at hand to refer to, we briefly repeat them. The winter thus far had come upon us unusually early and severe, and there was every appearance of its continuing so; that it would probably be followed by a cold, late spring, and that there must consequently be a much greater consumption of forage than usual; that the passage of the late tariff would enable our artisans to resume their manufactures to a greater extent than heretofore; that the modification of that of Great Britain would permit considerable exports of provisions; and that finally, money would become so abundant, and to be had at so low a rate of interest, as to induce capitalists to make such investments as would ensure the undertaking of new enterprises; and thus, notwithstanding the late abundant harvest, our farmers could henceforth look to more cheering prospects.

Well, a winter of unexampled severity has passed; a cold frosty spring is upon us, which we fear may continue to the end; and the corn in most instances all through the south has been cut off, and a second planting been necessary. In many parts of the country, especially at the great west, after consuming all the forage, thousands of cattle, sheep, and swine, have actually perished by starvation. It is stated that full one third of the flocks and herds have died in Michigan, though we think this an exaggeration. Now all these things must necessarily have an effect upon prices, and however favorable the harvest of the coming season may be, we doubt whether produce will be any lower than it now is; for, notwithstanding the great crops of the past year, all that has come forward has been rapidly shipped or sold, and our markets now are left comparatively bare. We can not hope for the abundant crop in all things that we had last season,—it was literally a year of abundance, and such as does not often occur.

For the two past months, Flour and Provisions have been steadily advancing in price. Cotton, after falling to one cent lower per pound than it was ever before known, has at length taken a start both in England and this country, and we should not be surprised if within three months, it were half, to one cent higher than at present. Certainly it must be, if the season does not assume a more favorable aspect; for the recent attempts at cultivation of this great staple have signally failed in India, and Europe must still look to the United States for its supplies of the middle and better qualities. The rise of cotton will affect other products more or less; so that with the present superabundance of capital, both in this country and abroad, we are satisfied that we are now entering upon a new career of prosperity, and that business generally will have assumed great activity by September next.

Several of the states seem determined to prosecute their internal improvements under any circumstances, and contracts are now making publicly and privately, for building railroads and digging canals in various sections of the Union. These enterprises, together with a fuller prosecution of manufactures, will divert some of the labor which for the last five years has been engaged in raising produce, to be the consumers of it; and to conclude, everything presents a much more cheering aspect to our mind. We may be over sanguine in our hopes and expectations, but we confidently think that the day of darkness is at length passed, and that we may now look forward to a bright series of years of steady, active, profitable business.

HENRY COLMAN, Esq.

This distinguished American farmer sailed from this port on the 7th of last month, in the packet ship Independence, on his long-cherished agricultural tour to Europe, and has by this time, in all probability, arrived in England. We wish him a pleasant sojourn among our brethren of the father land.

Mr. Colman has long been our warm and honored friend; and in this responsible undertaking of an agricultural survey of the most interesting parts of Europe, he has our best wishes of success. That his tour will add invaluable stores to the agricultural knowledge of our country, we can have no question; and of his ability to prosecute all necessary inquiries, and obtain all useful knowledge for the benefit of American agriculture, we have scarce a doubt. To the brief notice which Mr. Colman has given the public of his intended tour, he has received a most substantial' response, in a subscription of over two thousand copies of his proposed publication; and in this, from his ability as a scholar and his long experience and observation as a practical farmer, we anticipate a rich and rare treat in his volumes.

We expect to be regularly advised of Mr. Colman's movements during his absence, both in Great Britain and on the continent, and shall occasionally place his communications before our readers. His prospectus was given in our March No., page 366, and subscriptions to it will be received at our publishing office, Messrs. Saxton and Miles having been appointed the agents for this city. The first number of the Tour and Survey, comprising about 100 pages, will appear early in January next; and during Mr. Colman's absence in Europe, in order to ensure as much accuracy as possible, the proof sheets will be read by J. E. Teschemacher, Esq. of Boston, and ourselves.

Merino Sheep.—Several of our friends are going into the sheep business at the west, and wish us to make the inquiry at what prices one hundred pure-bred, choice Merino ewes can be had, delivered either at some port on the lakes, or on the Ohio river. We understand that there are fine flocks of pure, well-bred sheep in Washington county, Pennsylvania, and near Steubenville, Ohio, and we should be pleased to hear from their owners regarding them. Bucks will be taken from this part of the country, as it is thought that they are larger, stronger, and better bred, than at the west. We shall expect to be addressed *post paid* in all instances when making inquiries for others.

Samples of Wool.—We are repeatedly called upon, especially from the south, for samples of different kinds of wool, and we shall be obliged if our friends will furnish us a few, especially of Merino, both washed and unwashed, neatly arranged in separate locks on white paper.

Poland Hens.—We wish to know where we can obtain in this vicinity, the genuine Poland hen, of different colors and free from the muffled chop-cross of the French Poland. Any other curiosities in the poultry way, we should be glad to learn about. State prices at which they can be obtained in pairs.

Cincinnati Horticultural Society.—We are happy to see this society organized under such favorable circumstances, and return our thanks to the president and members, for being elected an honorary member thereof. It will give us great pleasure at all times to assist in promoting its laudable objects.

Credit Quotations.—The Southern Planter will find upon re-perusing this article, that the N. E. F., and not itself was the party in question. We have ever found the S. P. particularly scrupulous in giving credit for extracts. And while upon this subject, we notice some papers are in the habit of copying our Foreign Agricultural News, without giving us credit. We are always happy to see these things quoted, but as we make up the summary at considerable labor and expense, if the source from which it is derived can not be acknowledged, we shall hereafter mark the offending parties, and make their names public.

TO OUR SUBSCRIBERS.

We can not but feel grateful for the prompt manner in which nearly all who supported us last year, have come forward and renewed their subscriptions for the present volume of the Agriculturist. New subscribers are continually flocking in, and every one seems pleased with the elegant mechanical appearance of our new volume, and its varied and racy matter. According to present appearances, we shall soon have a circulation, to say the least, as large as any other agricultural paper in the United States. We feel extremely flattered by this preference on the part of the public, and our subscribers may be assured that each succeeding number of this paper will appear with embellishments and matter fully equal, and in some instances superior to the first, and we trust that all will continue to exert themselves in extending our subscription list.

Errata.—Page 10 of April No., read 22 for "2;" p. 11, Thomas Addis Emmet for "Robert Emmet;" p. 15, cash for "each," permits for "prevents;" p. 16, burn for "trim."

ORIGINAL CORRESPONDENCE.

We thought at first on reading over the following article, that we would divide it into two numbers, but the subject is so important a one, and it is so clearly and ably treated by the writer, that we have concluded to give it entire at once. Manure on Long Island, and in fact in all this neighborhood, costs the farmers, on an average of $15 to $20 per acre, when not produced on the land where wanted, and on gardens and nurseries it frequently costs $100 an acre; it will be seen, therefore, that it is a very important subject of consideration to all who wish to increase the fertility of their soil. The quotation from Mr. Clark shows, that when land is not too dear, it is much the cheapest method to grow the manures necessary for its fertilization immediately upon it; yet at the same time, everything within reach, at a reasonable cost of money or labor, ought to be carefully gathered up and applied.

For the American Agriculturist.

WHAT ARE THE MOST ECONOMICAL MANURES?

It is obviously *the first duty* of the agriculturist to bring his land into the highest condition for cultivation. It costs no more to plough, to harrow, to sow or plant, to hoe or cultivate, an acre that will produce thirty to fifty bushels of wheat or rye, sixty to a hundred of corn, five hundred to six hundred of potatoes, or a thousand of beets, turneps, or other roots, than to perform the same operations on land that will yield but one third as much. It is sufficiently manifest, then, without the trouble of stating the proof on which it rests, that of two persons who are carrying on the operations of farming under nearly the same advantages of markets, cost of labor, and original price of land, the one who gets the large crops, if they are obtained without too great an outlay for manures, can be making a fortune, while the other is losing one. The great importance of this subject, and the numerous circumstances which suggest variations in the system of enriching land, to adapt it to the location, means, facilities, &c., is a sufficient reason for calling the attention to it frequently.

The *system of fallowing*, which has the sanction of all past ages, and, till within a few years, the approbation of some of the leading agriculturists of modern times, seems now, by common consent, to be utterly exploded by all intelligent minds. I shall content myself by stating a single objection, as it is more than equivalent to all its advantages, even if five times as great as claimed; and this is the loss of the crops that might have been raised on it while lying idle. The object of fallowing is variously stated by its advocates, but, after the extermination of weeds and obnoxious grasses, they all resolve themselves into one. "Rest, renovation, *tired of crops*," and all the other phrases applied to soil, in rational language, imply simply, that there are certain constituent principles in soils which are absolutely, and invariably essential to the production of any given crop; and that one or more of these principles, in such condition as to be available to the growing crop, have become exhausted, or exist in such limited quantity, as to yield the farmer but a small return for his seeds and attention.

Soils have no whims or caprice to gratify; no favors or aversions to consult, but are, everywhere and under all circumstances, governed by fixed, uniform, and *rational* laws; and, under precisely the same circumstances of climate, season, moisture, and freedom from enemies and disease, if they contain the same elements and in the same proportions, they will with the same seeds and treatment, produce exactly alike. When we find, therefore, that land, which has once borne good crops, has subsequently failed in producing them, if all the other circumstances are similar, *we know* that some of the elements essential to vegetation have been exhausted to such extent as to require renewal. By adding manures of the right kind, we give to the soil the principle in which it was deficient, and which makes it once more to return its grateful crops to the husbandman. If denied it from this source, like a faithful servant, it will task all its powers, for a renewal of its wasted energies; but this it can only do in a state of rest. In this condition, acted on by the atmosphere and the moisture derived from it, in the various forms of dew, and rain, and snow; under the modifying and energetic influences of frost and heat, light and electricity—the last, though unseen and but little heeded, being undoubtedly *the great element* of change; such modifications of the original principles of soils take place, such new developments and combinations from the alumina, silex, lime, soda, sulphur, potash, phosphorus, and all the other ingredients composing it, together with such additions from the atmosphere, as enable it soon to renew again its accustomed burdens.

Now all these various objects can be accomplished, and much more rapidly, while clothed with vegetation, as this is an additional element of strength and effectiveness superadded to all the other agents. The whole expanded surface of the growing plants, through every one of their myriads of absorbent vessels, invisible to the most powerful microscope, is drawing in nutriment from the surrounding air—carbon, oxygen, and hydrogen, and we know not how much more besides; and condensing it into a solid and useful substance; while its roots aid by acting on the constituents of the soil with all the energy of vitality, to which even galvanic or electric force, or the intensity of a furnace heat, is but the infant's compared with a giant's mighty grasp, in detaching the intimate, and otherwise almost inseparable earthy compounds. *To give up vegetation as an agent for the renewal of fertility*, is *to relinquish the most powerful aid that can be found either in nature or art.* The difficulty is not that it is insufficient for the object required, but when matured, the temptation to rob the soil of its just dues, is too great to be successfully resisted by the short-sighted cupidity of its owners. They kill the goose that lays the golden eggs; or, like the greedy dog, they lose the prize they are sure of by diving after the shadow. Give but a portion of its own production back to the soil, and it will continue to yield, while the earth shall last, to the fullest measure of its capacity.

What vegetable productions, then, are best adapted to fertilizing the soil? Universal practice gives the preference to *clover*, at the north; and the most respectable testimony assigns to the *cow-pea* the preference for the south. They are each admirably adapted to this purpose. They are easily cultivated, by sowing broad-cast, harrowing, and rolling, and they require no subsequent attention. They are a sure crop on nearly all soils in good condition. They are easily turned under the surface, or, if required in part for the support of animal life, they are favorites, either green or dry, for nearly every quadruped of the farm. For a large portion of the lands in this country this is the only system that can be resorted to, with any hope of sustaining or augmenting their fertility. It is unquestionably true, that if all the refuse vegetation raised on the farm, stubble, bad hay, straw, leaves, &c., together with the excrements and remains of animals, which are simply the ultimate products of vegetation, could be added to the land, which should, at the same time, be protected from exhaustion, by washing or otherwise, it would be in a continual state of improvement; but as all these are unavoidably subject to great waste, and we are constantly taking off what, by no possibility of means, can be again added to the land in an undiminished state, we must look to other sources of compensation, if we would maintain the just balance of things.

Besides abundant and unquestionable proof, furnished by accurate experiments, which have shown the large proportion of material existing in every vegetable, which has been drawn exclusively from the atmosphere, experience, for a series of years, has shown, almost as conclusively, that by adding an occasional crop to the soil, its fertility is fully maintained, without the addition of any other substances, excepting in the most limited quantities. A rotation, for instance, in which a second, third, or fourth crop added to the soil, with scarcely an appreciable addition of gypsum, has been found to improve poor lands, and fully maintain good; enabling them to part with all the intervening crops without deterioration. It is as clear as light itself, however, such a practice must have a limit; that wheat, or any other crop containing principles not afforded by clover, can not be taken off the ground for an indefinite time, without returning to the soil where grown those identical principles, in some shape. Some soils will sustain this system longer, others shorter; ten, fifty, or it may be a hundred years—but it has a limit beyond which it will not go. Wheat has been found a prolific and profitable crop in every section of the United States, when the land was first subjected to cultivation; but in the older portions of them some essential ingredient has been exhausted, and the most careful manuring and husbandry have been found requisite to ensure a crop. At one time New England produced large quantities, and, as brought into successive cultivation, the region bordering the Hudson, the valley of the Mohawk, western New York, and now Ohio, the prairies, and the illimitable region beyond.

In adopting the above system, it is always advisable, whenever it can be economically done, that some of the salts, as they are chemically termed, such as plaster, lime, potash, or ashes, salt, &c., should be applied to the growing crop, as they sometimes add a principle in which the soil is deficient, by which it is enabled to supply vegetation till exhausted of some of the other materials. Gypsum, when found to be especially beneficial, ought to be liberally applied; and on clover, for which it is a food, and over nearly all the States remote from the seacoast, and in some instances near it, it is proved to contribute greatly to the growth of the crop, and frequently returns in the augmented product, 5, 10, and even 20 times its cost. Lime, also, is of great benefit on every soil not already charged with it; and salt in small quantities is valuable in addition to its efficiency in destroying grubs, worms, and insects. The above applications, with many others, are frequently said to act as a *stimulus* to vegetation; a somewhat indefinite phrase, as we conceive it has a very different method of acting from the ropesend, applied externally, or the whiskey internally, as an excitant to a sailor's strength. Gypsum furnishes food to many growing plants,—so does potash, salt, lime, soda, &c.; but they also help to decompose and liberate other principles held in excess in the soil, by which an equilibrium is restored, and vegetation has again a full supply of all its requisite materials. A slight addition to the foregoing may do much to prolong and even augment the fertility of soils which are dependent on crops alone for support.

There are, however, large sections of our country in the neighborhood of good markets, furnished by our larger cities and manufacturing towns, where the crops are too valuable to be thus applied; or rather, the object can be effected with other materials at a cheaper rate. Here large amounts of excrementitious matters are collected, rich in every principle of fertility, and if properly husbanded, they can be supplied in quantities sufficiently abundant, to sustain a broad margin of circumference in the highest condition. Your worthy correspondent, Mr. Partridge, is showing to the neighboring farmers what will prove more valuable to them than the mines of Potosi; and he is an explorer on those subjects, in whom full confidence may be placed; for, in addition to his qualifications as a practical farmer, most of the materials he describes have been the subject of repeated and strict analysis. Wherever any of these materials are furnished, as they frequently are through the country, by the manufacturers of any of the animal products, as wool, bones, horns, hair, hides, glue, or potash, glass, or some of the chemicals, they should always be carefully saved, and mixed with other ingredients for the benefit of the soil. Fish and sea-weed abound along our Atlantic coast, and whenever available, they should be skilfully compounded and applied to the contiguous land.

There is one source of fertility, so abundantly scattered over the northern and eastern portion of the country, that it can not be too often and too strongly brought to the notice of the farmer. It is the vast accumulations of *peat*, collected in nearly every swamp and muck hole, and abounding on almost every farm of hill and dale, east of the Alleganies. We have more than once before alluded to this, and it is unnecessary that I should now do more than call attention to it. When thrown out of its native bed and drained, and mixed with half its quantity of green stable-manure, it is ascertained to be fully equivalent to the latter unmixed. A dead horse has been found capable of converting 20 loads of it into a first quality of manure; and any animal substance compounded with it is absorbed, and all its nutritious gases retained, till they are yielded to the demands of vital vegetable affinities.

Ashes, containing all the fixed and inorganic substances of plants, are every way adapted to furnish these same materials to plants again. Whenever obtainable whether leached or unleached, they should be applied, unless the soil is already preoccupied, in which case, as in the application of all similar salts in excess, they are for the time being, useless, and in some instances, positively injurious.

For that portion of the farm contiguous to the stables and cattle-yards, however, nothing is better adapted to sustain fertility with every form of cultivation, than the animal and vegetable manures there found. The bottom of the yard, which should possess the concave form like a dish, so as to save all the drainings, ought to be covered to the depth of 2 feet with vegetable matter of some kind if possible, such as peat, dry tanner's bark, straw, hay, weeds, corn-stalks, or anything of this nature, and if these are unattainable, the richest turf that can be procured may be substituted. All the evacuations from the animals, should be dropped on this, or immediately added to it, before draining or evaporation can take place, so that all the liquid and gaseous portions may be absorbed. By allowing these to escape, a large portion of the manure is wasted. The manure may be doubled or trebled by augmenting the materials to receive and retain it, and so much of the yard as can be sheltered should be guarded from rain and excessive heat, to prevent the washing of the soluble portions and the escape of the gases. Fermentation should be allowed to take place, only when covered with earth or peat, or such substances as will at once seize upon and retain the ammonia, which is always set free to a greater or less extent, whenever fermentation takes place. We prefer this operation should go forward, while surrounded by furrows, and surmounted by a growing crop, so that the rootlets of the plants, while immersed in this steam-bath, can drink in at every spongiole, the nutritious vapor as it is generated. The record of crops, thus grown, show conclusively the advantage they enjoy from the proximity. We believe that vast improvements are yet to be made in securing the aerial portions of manure, which escape all the precautions for detention, hitherto practised by the most careful. Lime scattered around the premises, will do this to a certain extent; charcoal, gypsum, particularly when dry or burnt, are both powerful condensers of ammonia, the fertilizing principle that escapes. Chloride of lime, if it can be made sufficiently cheap, we think will be a powerful and perhaps entirely efficient absorbent. All of these, when saturated, may be spread upon and mixed with the soil, when they will yield their concentrated nutrition to vegetation. But I am inadvertently going over much more ground than I anticipated when commencing this article, and must bring it to a close, by quoting the relative cost of the three most general systems of fertilizers as estimated by Hon. William Clark, of Northampton, Mass.; premising, that the land here subjected to cultivation, was worn out pine plains, which had been bought within two miles of the village, at the price reckoned. I believe that an increase in the intrinsic value of the land would make much more difference in favor of *growing* manure, as one season could furnish a crop twice or three times as great as would be produced on the cheap land in two years.

Cost of raising manure by the growth of clover and grass 2 years on land worth $10 per acre.

Two years' interest on land - - - -	$1.20
8 pounds clover seed, 80 cts.; 8 pounds red top, 25 cts.; 4 quarts timothy, 33 cts. -	1.38
½ bushel plaster and sowing and rolling for 2 years - - - - - - -	1.10
Total - - - - - -	3.68
Cost of manuring an acre, with an amount of fertilizing material equivalent to the foregoing, furnished by 2 parts of peat, and one part green stable manure, allowing as the cost of the peat, 25 cts. per ton for digging, and $1 a cord for the stable-manure, and cost of hauling and spreading - -	7.48
Cost of manure equal to the above, one acre with stable-manure, at one dollar a cord, and carting and spreading - - - -	12.14

By the above calculation, made by a shrewd and accurate observer, in whose opinions I place great confidence, we have lands manured by the crop, at less than one half the price of the peat, and nearly one third that of stable manure. A large item of costs in the foregoing is the labor, the cost of hauling and spreading of which is entirely saved in the first process, it being produced just where it is wanted. It may be observed as a partial correction to the above, that the peat is applied to a great disadvantage. If it were compounded with the carcases of dead animals, which would otherwise be wasted, or if it could be made to receive the wash or drippings from the stables and yards, or in some instances, where the land has sufficient digestive power, as is the case with the porous, dry, greedy, silicious soils, if it be applied in its raw condition, the costs may be reduced, when not too remote, to even below that of the exclusively vegetable manure. I may add, also, when the land undergoes a rotation once in two or three years, the seed charged above may be omitted in the account, as enough will be found in the ground to furnish an abundant supply. We conceive it increases the profits of the above system, to allow cattle, and especially sheep, to consume a part of the vegetation, as the benefits to the ground is scarcely diminished, if consumed in the field, and sheep have a cleansing effect, by eating nearly every particle of weeds and obnoxious plants.

R. L. Allen.

Buffalo, March, 1843.

For the American Agriculturist.

Near Lockport, Illinois, Feby. 17th, 1843.

Sir: Having occasionally seen your agricultural paper in this state, and noticed your invitation to correspondents, I am induced to say a few words to you on affairs in this quarter of the Union. The country around us is mostly rolling prairie, and furnishes, I believe, as fine a natural soil as the sun ever shone on. It is highly productive, and matures almost every kind of crop which is cultivated. It is also admirably adapted for cattle, horses, sheep, and swine; and I am satisfied we can raise them as cheap as can be done in any part of the world, *where labor is fairly paid*; for they are subject to few diseases, food is furnished in great abundance at the cheapest rates, and the climate is not severe.

Everything seems to be favorable to our prosperity, so far as nature is concerned, but the miserable condition of the currency, and the debts of our state seem to blight our best prospects. Could we enjoy a stable, wise system of things in the state and general government, we should reap a fair return for our labor. We are trying to do something by way of getting out of our difficulties, by turning over our canal, and the lands appropriated to it for the purpose of completing it in such way as that it can be made available. If we succeed in this, we shall have brighter prospects so far as the canal route is concerned, and we hope for such a gradual amelioration of things, as will soon afford us a sufficient currency, and a sound state of trade.

But to the subject of agriculture. We are endeavoring to procure good breeds of animals, and wish all the information on the subject we can get from every source. Some of our enterprising farmers have procured valuable ones, among whom I may mention our public-spirited commissioner, Wm. Gooding, Esq., who brought a number of choice Berkshires from Buffalo; and Mr. James Murray, whose sheep management you described in your September paper, and who, in addition to his fine flock of Cheviots, brought on two very valuable Paular Merino bucks last fall, for the purpose of improving the quality of their wool. Such spirited movements, generally followed up through the state, would soon give us as productive an agricultural district as the United States afford.

There is a great deficiency in our farmers not taking more agricultural papers. Could every one be induced to do this, we should soon have a great advancement in everything pertaining to our interest. We should then be advised of the improvements going forward in the world, and know what to adopt, and what to reject; and it is probable every man who owned a quarter section of land, would be benefited to ten, perhaps fifty times the amount of his subscription. There is no excuse for this indifference to their best interest, but the excessive scarcity of money, and this rather aggravates than excuses the neglect, as every farmer would by this means *get money*, instead of spending it. I am very respectfully yours,

T. L. C.

A. B. Allen, Esq., *New York*.

For the American Agriculturist.

AGRICULTURAL SCHOOLS.

A. B. Allen, Esq.—Sir: What has become of our agricultural schools and colleges? I suppose you will answer we have never had any. Well then, what has become of the many suggestions and plans which have appeared in our agricultural papers, able and well-written articles, setting forth the importance of such institutions in these United States? Were the writers all visionary men—having been humbugged themselves, and then in their turn, humbugging others? Or is it a sober truth, that the sons of the farmers should be educated to their profession, as well as other young men to theirs?

We may talk and write upon the science of chemistry, analyzing soils, rotation of crops, plowing in all sorts of vegetation for manure, use of lime, ashes, salt, charcoal, and various other fertilizers, all of which is well in its place, and does a vast deal toward leading the mind to investigate for itself. Yet, after all, the reason of the why and wherefore of the action of these things lies far beyond the reach of the mass of the farming community; whereas, were there but a single individual in each county in the State of New York, thoroughly educated, with a paid salary to go about among the farmers, lecturing and instructing them, it would prove like leaven, leavening the whole lump. If we are not to have the Smithsonian bequest, to do something with on a respectable and national scale, let an individual state establish a small school. This may be done at a profit on the outlay, for while the cattle are breeding, the stock growing, the crops vegetating and maturing, the experiments are being carried on in all these operations, as well as the more minute, under cover, in rainy or stormy days, as well as evenings. Are there no men of fortune and leisure to be found, who are willing to take hold of this thing?

S.

New York, April 6th, 1843.

Our correspondent, it will be seen, is rather severe upon the peacock, and per contra, we will say, that when well fatted, and not over a year old, we have found them delicious food. Peahens were considered a great luxury on the tables of the Romans.

For the American Agriculturist.

THE PEACOCK.

The most showy and magnificent bird of the farm-yard is the Peacock—but it is a bird for ornament solely. Of use they are none. They are found in all latitudes of the United States, and in the pleasure-ground, on a portico, a balustrade, or the house-top, a favorite perch by the way, for this wayward and capricious creature. No object can be more beautiful. I need not describe the brilliancy of its plumage, the color of its various dyes, nor the exceeding elegance of its form. These are familiar to all our readers.

Idle and vagrant in its habits, mischievous in its propensities, and of little utility either in its carcase or its eggs, it is tolerant alone for its gorgeous display of plumage, and the showy splendor of its attitudes. I have kept them many years, and every year of my observation only confirms in my mind the truth of the ancient proverb applied to the Peacock. "It has the plumage of an angel, the voice of a devil, and maw of a thief." They are destructive in the garden, vindictive and quarrelsome among other poultry, without either the merit of bravery, or the energy of defence. Yet after all, I like them, they make such a beautiful show among the poultry, and add to the infinite and delightful variety of animated creatures, with which a kind Providence has blessed our vision.

L. F. Allen.

The Peacock.—(Fig. 10.)

For the American Agriculturist.

FARM-DOGS.

This may be deemed by many, a small subject; but I apprehend in a great many cases, it is in practice, found large enough to produce infinite mischief and inconvenience. The American people are probably more miscellaneous in the choice of their dogs than any other, and nothing is more common than to find attached to a farm-house, and to pretty much every other house too for that matter, in this country, an overgrown and ungainly Bose, Lion, Watch, or Tiger, and in more than half the cases, not worth in his whole life the food he eats in a week. In a "democratic" country like ours, it may be thought impertinent to criticise the public taste in the question of a dog; but nevertheless, as they are usually considered, and in frequent instances really are, an indispensable adjunct of one's establishment, it may not be amiss to ascertain what in truth is the best species of animal for the farm. Do not imagine that I am a dog-hater, and that these interesting, as well as useful creatures attract none of my esteem. The first live thing that I ever owned in early boyhood was a puppy, and a faithful and favorite dog has been among my companions more or less ever since.

But I am by no means an indiscriminate admirer of the race. An uncouth brute without breeding I detest. No one better likes a true bred, sagacious animal than myself. For guarding purposes large dogs are required, and none, perhaps, will better answer than the Newfoundland, which unites the generosity, ingenuity, and intelligence of the race more than almost any other; while the Hound, Setter, Pointer, and the numerous kinds of Spaniels, furnish to the sportsman all the requisites for his varied pursuit. The Bull-dog and Mastiff I have little affection for. Their savage, cruel, and ferocious disposition need only be called in requisition when the midnight robber or the determined burglar are to be repelled, and for common farm uses are little to be desired. The common cur of the country, running through all sizes and gradations, and into the limits of almost every other breed, is, on the whole, a pretty good animal, and answers a tolerable purpose; but the very best farm-dog I have yet seen, is the Terrier. These are of great variety, but the size I prefer is not larger than a fox; and in sagacity and fidelity, they are equal to any except the Newfoundland, and in courage *they have no equal.* To all vermin they have a natural, and most destructive hatred; nothing escapes their vigilance. They see at night nearly as well as the owl, and their watchfulness and wonderful activity are perpetually on the alert. No buildings need be infested with rats if they can get under them, nor the fields with mice, weazels, polecats, minks, or other noxious animals, if two or three of these useful creatures be near; for if kept in pairs, or more, they will hunt for days together, away by themselves, and destroy thousands of mischievous depredators. For squirrel and rackoon hunting, and duck-shooting, the rough-haired Scotch terrier is equal to any other; and in a chase, within sight of the game few dogs are their equal.

I now own a terrier that I have had for five years past, raised him from a puppy, not cropped either in the ears or tail, for this I detest, and it greatly retards their activity for a farm-dog, and I have never yet seen his equal. In his labors of watchfulness, he is now attended by two of his sons of the same stock, and all vermin and mischievous animals are effectually kept at a distance. Hundreds of racoons, foxes, and minks, have they destroyed, besides whole hecatombs of field mice, rats, and squirrels. They eat little, are out of the way, light, agile, and altogether are the best dogs I know. They are to be found in almost every village and principal town in the country; but care should be taken to get those of true breed, or as near to it as may be. There are many varieties, but the rough-haired, medium sized are the kind I prefer. Those who are curious and particular in their dogs, need but to try the Terrier, to be convinced of their value. My old dog, Peterkin, has caught many a wounded duck in the broad river in fair diving, and swimming with heavy ice running in the current, he has nosed out and killed several minks under water, has swam across the Niagara where it is half a mile wide, with a strong current, time and again, and was never whipped by another dog in his life.

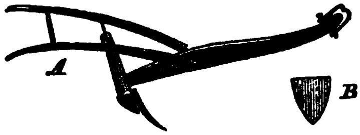
L. F. Allen.

For the American Agriculturist.

SOUTHERN PLOWS AND PLOWING.

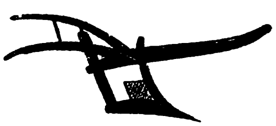
Mr. A. B. Allen: As good plowing is the foundation of good husbandry, and as it is necessary to have good plows to be enabled to do good plowing, I propose to describe a few of those that I have met with in North Carolina, South Carolina, and Georgia, that you may see how they will compare with northern plows, and whether they are the best that could be adopted for southern culture. The first is the shovel-plow. I refer you to the pencil sketch for a view. The figure at *A* gives you the plow entire, ready for use; *B* gives a front view of the iron that occupies the place of a mold-board in the northern plow. It is made out of wrought-iron, in the shape of the blade of an Irish shovel, with a loop on the back side for the stock to enter. They are generally made by the blacksmith on the plantation where they are used. The operation is to draw them through the ground with one horse or mule, the plowman holding them in an upright position, throwing the dirt both ways, mostly to the right hand, or furrow-side of the work. It is pretty much like dragging a cat by the tail. Then comes the bull-tongue, made much like the shovel-plow, except the iron part, which is narrower and thicker. I have seen them from 4 to 6 inches wide in the widest place, and 1 to 1 1-2 inches thick, tapering to a point both ways, looped on the backside to fasten it to the stock as above. It takes its name from its resemblance to the tongue of the animal. To plow with it, is a cat-pulling operation.

(Fig. 11.)



The next that I will notice, and perhaps the best in use of those manufactured on the plantation, is the "Allen plow." This is a wrought-iron plow, with mold-board, land-side, and standard and point, all connected, and forming but one piece. The mold-board forms an angle of about 40 degrees, with a line of the beam, and, in operation, will throw the dirt from one to three feet, according to the speed of the team. In figure 12 you have a sketch of one as it stands ready for use. The land-side is a bar of iron, about 1 to 1 1-2 inches wide, and from 1-2 to 3-4 of an inch thick; standard, about 1-2 inch by 1 1-4 inches. The mold-board is a piece about 1-4 inch in thickness, welded on to the standard, without braces, or any other support. They are from 6 to 10 inches wide, furrow-wise, and are used with one or two horses or mules, as the stiffness of the soil may require—usually with one mule on sandy lands. It costs from three to five dollars, and will last one season. This plow, on a sandy soil that is perfectly clean and free from weeds or grass roots, does very well, where it is desirable to throw and scatter the ground or furrow; but in a sandy or loamy soil that has a coat of vegetable matter to turn under, of either grass or weeds, or for plowing in manure, it would be useless for a person who desired the work well done. The dagon plow is the same as the Dutch bull-plow of the north, with wooden mold-board, and wrought-iron share. I have seen but a few of them in use. The Scooter plow, I believe, is of the bull-tongue variety.

(Fig. 12.)



Of the cast-iron plows, I find more of Freeborn's in use than any other kind; and although they are inferior in form to all of the improved northern plows, they do fair work on the naked sandy lands of the south. They are made in a cheap, rough manner, and sold at a low price, which is the best recommendation they could have.

I have met with very few of the improved northern plows. Those that I have seen are Ruggles, Nourse, & Mason's, of Worcester; and D. Prouty & Co.'s, Boston. They are denominated here the turning plow, and have earned the same high reputation that they have at home; but they are by no means in general use. They are, in fact, scarcely known. They are only now and then to be found in the hands of a planter of enterprise, who has made up his mind to break through popular prejudices, discard the exhausting system, and bring science in aid of labor, in his agricultural pursuits.

Barnaby & Mooers's plow is unknown here, except to such as have been in the habit of reading the agricultural papers, and seen the accounts of the premiums that it has won at the various plowing-matches at the north. I have been exhibiting some of them in this city the past week. They are regarded as an ingenious and useful improvement, but are said to be too heavy (No. 4) for the lands here. They do not reflect that the resistance that a plow offers, in being moved through the ground, is more the result of shape than weight. I have no doubt that it will be found, on trial, that Barnaby & Mooers's No. 4, weighing about 120 lbs. in full rig, will require less power of team to turn a given amount of earth than the Allen plow will; that only weighs about 40 or 50 lbs. If I can get a trial of plows here, as I anticipate, I will give you the result.

The cultivator is very little in use here. It don't seem to be a favorite at all, although, properly made, it would be a better implement than any now used in the cultivation of corn and cotton, except the sweep, which does its work very much as a good cultivator should, and is a useful instrument.

If, during my stay at the south, I discover anything that will aid the cause of agriculture, or be interesting to your readers, you may hear from me again. E. Cornell.

Augusta, Georgia, March 16, 1843.

In answer to Mr. Hendrickson's inquiries as to the manner of obtaining the large crops, for which premiums were awarded at the late meeting of the New York State Agricultural Society, we do not find anything very peculiar in the cultivation. Where the land was not naturally rich, it was made so by a plentiful use of barnyard manure, and some ashes and plaster. Mr. Phelps planted his corn in hills two feet apart each way; kept it clear of all weeds, and obtained a product of 122 bushels to the acre. Of oats, he sowed five bushels to the acre, on well-manured land, and obtained 102 bushels. In the same field, side by side, without manure, he got less than 86 bushels on an acre and a half; thus demonstrating, even on naturally rich land, the benefit of adding fertilizing substances to it. The same care was used in the cultivation of all the other grain, and also of the root crops, and the products were uncommonly large.

For the American Agriculturist.

CULTIVATION OF CORN IN OHIO.

Middletown, O., March 1, 1843.

Mr. A. B. Allen, Dear Sir: In looking over the February No. of your paper, I noticed in the report of your State Agricultural Society, an account of some extraordinary crops of grain, which puts the blush upon our Buckeye twenty-foot cornstalks; yet I do not doubt the truth of the statements.

My object in addressing you is to learn by what process such splendid results have been attained; the kind of seed, and the time of sowing; the method of preparation, and the kind of soil. Was the barley the spring or fall variety, and how much seed was sown per acre? Oats—the time of sowing, the kind of seed, and how much per acre?

As you did me the honor to mention my corn crop in your paper, contrary to anticipation, your notice has brought me a liberal amount of orders for seed; and I feel under obligation to give some explanation of the process by which I obtained it. When the common method of selling corn was by measure, some six years since, I planted exclusively the large gourd-seed variety, which had a large ear, small cob, and deep grain. It was rough upon the outer ends, and would weigh from 52 to 54 lbs. per bushel.

The system of selling corn by weight being established, a[illegible]8 lbs. to the bushel, induced me to undertake some method of increasing weight as well as quantity. I therefore selected, to mix with my gourd seed—first, a kind with large ears, large cob, and shallow, flinty grain; second, what is termed the flesh-colored variety; third, the real flint, weighing 63 lbs. to the bushel; fourth, the large Virginia yellow. These mixtures were entirely different kinds of corn, and raised in different sections of the country. They were well mixed, and my first crop presented rather a motley appearance; the second was uniform. Finally came the *miqua* variety which I now cultivate, with small red cob, and large ears. It is now a reddish color, weighing 60 to 61 lbs. per bushel, and yields from 80 to 100 bushels per acre, according to soil and cultivation.

My method of selecting my seed is as follows: During the gathering of the crop, I have attached to the tail end of my wagon a large basket, into which is deposited the choice of all the ears. My method is to save for seed all the ears where there is more than one on a stock, as it does add to the yield.

My method of cultivation is, to plow my ground as deep as two big horses can tug, with a No. 7 plow, commencing the work the latter part of March. I plant without harrowing, as the ground is more liable to bake and become hard if harrowed, in consequence of heavy spring rains. I usually commence planting about the 15th of April, by furrowing out the land the first way with a large plow, four or five inches deep, and then cross-furrow it with a smaller plow, and not so deep, which gives a quantity of mellow earth for the corn to be covered in. It is furrowed in squares, from 4 feet to 4 feet 4 inches, according to the quality of the soil. I drop in each hill from five to seven grains, and as soon as it is up two or three inches, pass through twice in a row with the cultivator, in the direction in which it was last furrowed; and, in about a week, pass twice through in the contrary direction. And now comes the time for thinning out. This is done by reducing the stalks in each hill to three or four; and I then commence plowing. If the corn be sufficiently large to prevent its being covered by the dirt in plowing, I throw the furrow toward the corn; if not, from it. I generally plow my corn three or four times, and by all means avoid working the ground when wet, as it not only injures the soil, but the crop.

The Kenilworth pigs you imported for me are coming out beyond all expectation; and when I shall have had time to make a cross with them and Windsor Castle, and some of our great Miamies, I can produce something that will astonish the natives of the empire State quite as much as we of the Miami valley have been stirred up with Mr. Phelps's 102 bushels of oats per acre.

Yours, &c., R. H. HENDRICKSON.

For the American Agriculturist.

CULTIVATION OF COTTON.—No. 1.

Log Hall, Miss., March 9, 1843.

A. B. ALLEN, Esq.—SIR: I propose giving you a series of articles on the cultivation of cotton, going over the whole matter, from plowing to sowing, picking and baling. I assure you, I undertake the matter with a degree of reluctance, not usual to me in such matters. This reluctance must not be attributable to any want of desire, but more from the fear, that I can not make the matter of that interest that is expected of me. I can say, there is a satisfaction in giving my aid to you in your exertions, as also in having a fair chance to talk to my brother chip, Dr. Cloud.

In the first place I assure Dr. C., and all others whom it may concern, that I do practise to the letter the plan I point out, and that there are many others who pursue the same, in all its minutiæ; we may not cultivate every year each field of cotton precisely alike, nor do I think it is desirable that the science of farming should ever be reduced to a mere trade, as cutting braces, or making sash. Individuals following farming, may have a general outline of proceeding usually pursued, but subject to variations according to the season, time of planting, and ordinary health or casualties. As an instance; last season I had cleaned over the first time, nearly 40 acres of cotton, and after commencing another field, I thought it best to return to this with plows and hoes, to give earth to the plant; a few days of quite cold weather having threatened, as I feared, the life of the cotton. Had I continued in the routine of putting in order in rotation, I think I might have lost that portion of my crop; whereas, the light earth protected it, and such changes must continually occur.

Forced from want of patients to quit the "pill tile," and give up the "spatula," I necessarily sought the field, and having given it my entire attention, it appears to me that the mode I pursue is so much a matter of course, that I see nothing either bordering on a "degree of perfection" or worthy of applause; and from this feeling I am induced to think, that my brother chip has an overseer, and enjoys "otium cum dignitate," or as we farmers say, "lives easy." Unless I could give as much interest as others have by a "first trip to mill," or one's "first dinner in New Orleans," I can not see that a mere talk of one's course merits much thanks.

In remarking upon the "dilapidated appearance which almost every cotton plantation, of but a half dozen years' standing, presents to the eye, sickening under this blighting influence," (see Dr. C's. article, last paragraph page 192, Vol. III. Cultivator), alluding to "the system of culture" and "meager accruing profits," &c.; I think he is rather severe. It is certainly late for the discovery to be made, that the system contains within itself, "the elements of certain destruction," and strange that the poor patient has survived 50 years with this disease within its bosom. So far from this being the case, as far as my experience goes, we now make a larger per hand crop than formerly. I well remember hearing of a crop of 8 bales per hand, much bragged of in 1831, through this whole region; whereas, this has since been equalled with an abundance of corn and pork, and no talk of it at that. The language of Dr. Cloud when on this branch of his subject, sounds rather like that great, little dandy, Dickens, in his "Notes," &c.; and if your readers will refer back to the time, when farmers were careless in your region of our country, they will find that other cause exists for it than cotton.

I think the mode of cultivation can be improved, and I think Dr. C. has touched the right key, but I think also, that there is more fault in the desire of making large crops, than in the system of farming, unless he considers it a part of the system; and if he does, he only adds fuel to the fire; that is now (according to his opinion) wasting his patient away. The fond hope of making 5,989 pounds of seed cotton, would run us all mad—we would not take time to cook—Sunday would be in name, and our nights would be turned to day, if burning cane in the cotton-fields, could make light enough by which to work. Our peculiar crop requires the whole year to get it available, if a large crop. One of my neighbors is now really absent, selling his last crop, while his hands are planting this crop (not cotton, but corn, &c.); we therefore have not the leisure to improve. Yet even with all this, I have seen gulleys, dilapidated fences, and scratching the surface; in short, bad farming elsewhere, than in the cotton region; and I believe the same cause exists, viz., either indolence, or too great anxiety to accumulate property, instead of taking proper care of that already secured. I may be expected to give my prescription, differing as I do from Dr. C., as to the best mode of eradicating the evil; for I acknowledge there is an evil, but think it inherent in man, not in the cotton-planter, nor in working 8 to 10 acres of cotton per hand, instead of 4 or 5. The evil is, or rather the evils are, *planting* for too large a crop, not *cultivating;* and throwing away the farmer's best jewel—his manure. If I am right in pointing out the disease, the remedy is at once apparent; cultivate for a less crop, cultivate well; save all manure, and add to it, as a part of the regular business of every farm. Which farmer gets on best—the one who clears a very small amount, yet in a series of years is possessed of as much effective force as him who makes the greatest possible exertion, and wears out his land, and diminishes his force?

I would rather induce our brethren, by persuasion, to keep all things about them in good order, than to cast them off, as entirely lost. The times are as bad on the grain-grower and pork-producer, as on us; their profits must be "meager" indeed, and we should, in looking around, reflect on 38 cents for wheat, 3 cents for bacon, 16 cents for corn, and the latter two brought from several hundred miles. Can we complain at 5 cents for cotton? should we despair? We are making abundance of the necessaries of life, and if our farmers will but give up the idea of amassing fortunes for their children, and learn them to work, instead of reading Blackstone, or feeling pulses with kid gloves on, I doubt not, in a very few years, even with this same mode of culture, we will see grass-plots, flowers and shrubbery; hear the sweet music of the spinning-wheel, lowing of herds, tinkling of bells, and taste of the delights of social life.

I am done with my preface now, and assure you, I have no unkind feeling, being only desirous to defend my calling, and as no one seemed willing to do so, I *have ventured* thus far. I am, yours, &c.,

M. W. PHILIPS.

REMEDY FOR HARD TIMES.

We have been asked repeatedly to give our views at length, upon the present state of the country, but we have thought proper, thus far to forbear. We fear that we might be accused of a political bias, foreign to the object of this paper. Still we think it legitimately within the scope of an agricultural journal, to give such views from time to time of the state of the nation as will tend especially to promote the interests of the farmers, and if we could depend upon our readers looking upon these subjects in the broad national view in which it should be our aim to place them, we should henceforward feel less hesitation in entering upon their discussion.

From a letter recently received from Thomas B. Stevenson, Esq., late editor of the Kentucky Farmer, and now of the Commonwealth, we quote a paragraph. Here is the best remedy for hard times that we know of, and if all states will go and do likewise, there will soon be an end of them.

"The people of Kentucky are righting up in pecuniary matters rapidly. The crisis is past. We are buying nothing and selling a good deal, though at low rates. Exchange on the east is in our favor. Not only have we stopped buying foreign goods, but our people are returning to the old time-honored practice of manufacturing domestics by household industry. The wheel has lain idle for some years, but it is buzzing away now. Hemp, flax, linens, jeans, linseys, woollens, &c., the product of family looms, are substituted for foreign goods."

As the following communication comes from one of much personal experience in sheep-breeding, after due consideration, the subject seems so important, we have concluded to admit the article into our columns. Our correspondent will perceive now, that two numbers of the promised essays on fine-woolled "Sheep Husbandry" have already appeared. Ill health of the intended writer has prevented the promised series on middle-woolled flocks. We hope, however, to be favored with them soon.

SHEEP, PAULAR MERINOS.

TO THE EDITOR OF THE AMERICAN AGRICULTURIST—SIR: I am a reader of your paper, and always much interested by what you have to say about farm stock, more especially sheep, with which I have been conversant to a greater or less extent for a long time, commencing about thirty years since, when I first became a sheep owner.

It is an admitted fact, that the fine-woolled flocks of the United States are sadly deteriorated, indeed, nearly "run out," so much so as to be far less profitable as regards weight of fleece, &c., than formerly in the days of the *old-fashioned Merino* sheep, when they were in their glory, before the unfortunate introduction of the delicate *Saxon* race, the *cross* of which ruined all the best Merino flocks of this country. How to regain or restore their lost excellence, is the question. A good available method of obtaining that important result, would be truly a desideratum; and he who should be able to point it out and bring it within the reach of the farmers and wool-growers of our country, would be a public benefactor.

In your article on "Sheep Husbandry," at page 159, of Vol. I. of the Agriculturist, you recommend where *wool* is the object, the use of Paular, and of Rambouillet Merino rams. As to *Paular* bucks, it strikes me that you might, for any practical purposes, just as well have advised a cross of the fabulous unicorn, for it would be just as easy to find the one as the other at the present time in the United States; for depend upon it, there is no such thing now existing, as a *Paular buck, nor anything deserving the name* in the whole country. Your recommendation, however, as to the rams, was certainly a good one, if such sheep as you named could be found in the country; but there lay the difficulty, as I had reason to know, for I have formerly taken no little trouble to investigate the matter, and with uniform results. When the wool-growers generally had discovered their error, in adopting the delicate and light-fleeced Saxons, and would have returned to the hardy and more profitable old-fashioned Merinos, many persons in various parts of the country claimed then, as they do *now*, to have the true sort, "the real Simon Pure," and some of them doubtless honestly *believed* they had,—but they were mistaken. I have myself gone great distances to find the right sort, and have been invariably disappointed. Sometimes formerly, I have been induced by the strongest representations and assurances, to purchase such as were said to be pure Merinos beyond any doubt, but always found afterward, that it was a *mistake* as to their being pure old Merinos. The experience of many other persons, some of the best judges in the whole country, will confirm what I say. The fact is, that for quite a number of years past, there were *none* of the old Merinos, in the whole country, strange as it may seem, not one remaining of unquestionable purity of blood, *none that could be relied on.* The *only* exception *now* to be found, the public are indebted to you for their knowledge of, (and I cheerfully acknowledge my own obligation to you for it); I refer to the small breeding flock of pure Merinos at Hartford, Connecticut, lately imported from the royal Rambouillet flock, which you discovered and reported in your September number. That importation of pure fresh Merino blood, I look upon as being opportune and of great value and importance to the whole country, if, as will doubtless be the case, the growing of fine wool is hereafter to be an object of consequence and of profit in the United States.

I observed with some interest and curiosity, a notice which you gave in your August number, that you had received a letter from a correspondent with specimens of Merino wool, and a portrait of a Paular buck, which "you should give in your next." I was curious to see what sort of a Paular buck it would prove to be, and accordingly looked for it in your September number, where at page 178 I found the promised letter of Mr. Jewett of Vermont, but not the portrait of the Paular buck. But I suppose that we have probably seen in the August number of the Albany Cultivator, the portrait referred to. Being without information from Mr. J. as to the pedigree of his buck, and how he was bred, we can not decide *what* he is, but *whatever* else that ram may be, I will venture the opinion that he is certainly *not* a *Paular*. *Such use* of the fair name of the *Paulars* is beyond all question *libellous*, though perhaps *not actionable* in the Vermont courts of law. Sheep, as well as other things, should be called by their right names, though in justice to Mr. Jewett, I would disclaim imputing to him anything like unfairness of intention, in selecting a popular specific name for his sheep.

But a single glance at the *portrait* of the buck, or the slightest examination of his fleece, would be sufficient to settle the question, not only that he is *not* a Paular (unless greatly changed or deteriorated from the original), but would also authorize the belief that he is *not a pure bred Merino of any sort*, but a mongrel sheep of some kind or other, very likely having a cross of some sort of large English sheep just by way of "improvement," though, if so, doubtless it was without the knowledge of the present owner, and prior to his possession of the blood. It would take much to satisfy me that this is not the case,—but however that may be, I am well assured that the ram is not a genuine Paular, for if we may rely at all on the faithfulness of the portrait, or judge by the quality of his fleece, he is eminently destitute of some of the most essential characteristics and distinctive peculiarities of the Paular sheep, which are distinguished among other things, by a greater and more evident degree of *throatiness* than any other flock of Merinos in all Spain. Their fleece is also among the finest and best of all the choice travelling flocks of Spain; so much so, that for many years the exportation of the Paular wool from Spain was strictly prohibited, the whole of it being retained for the use of the royal manufactory of cloths, at Guadalaxara. Yet Mr. Jewett, in his letter accompanying the portrait of his buck in the Albany Cultivator for August last, speaks thus doubtingly as to the quality of the wool. He says (to quote his own words): "The wool from these Paular Merinos is not as fine as some other varieties, but I *think they should be classed among the fine-woolled sheep*."

When, let me ask, was there ever heard before, a *doubt* whether the Paulars would take rank, and a *high rank* too, among the fine-woolled sheep? But after seeing the fleece of his (so-called) Paular buck, no one will wonder that Mr. J. should speak doubtingly on the subject. If his ram was a specimen, he might well doubt. We have no sort of doubt about it; we say unhesitatingly that such wool as that of the ram above spoken of, is not entitled to be classed among the fine wools, nor should the ancient and most highly valuable Paular Merino race, be discredited by such use of its name—for assuredly the fleece of the Vermont ram in question, is no more like the real Paular wool of Spain, than it is like the South Down or some other of the harsh* kinds of English wool, which it somewhat resembles.

Pardon the unintended length of my "Paular" lucubrations, and believe me,

Yours, faithfully,

EXAMINER.

New York, Feb. 28th, 1843.

P. S. What has become of the promised "Essays" on sheep, which, in your preface to your own article on Sheep Husbandry in your August number, you told us you were in daily expectation of receiving from *two* of your valued friends? Surely they have not *both* disappointed you, or have we already had the said essays, and digested them "without knowing when good cometh?" After such a flourish of trumpets, we expected something not only instructive, but interesting, though upon an old subject. In all other respects, I think your journal and its editors have not only redeemed their promises, but fully met public expectation.

For the American Agriculturist.

CULTIVATION OF MADDER.—No. I.

The great depression in every kind of agricultural produce, makes it the duty of patriotic citizens to point out any new vegetable products wanting in the practical arts. Of these there are some five or six, hitherto imported from foreign countries, that can just as well be grown by our farmers as by foreigners. These are madder, Indigo, Sicilian sumach (*rhus coriaria*), Italian sumach (*rhus cotinus*), weld (*residæ lutiola*), and woad.

I undertook to bring these articles to the attention of our agriculturists some fifteen years since, but the then high price of produce paralyzed the effort. I will again bring them to their notice, and I hope with better effect. Gibson quotes a wise maxim from the Zendavesta. "He who sows the ground with care and diligence, acquires a greater stock of religious merit, than he could gain by a repetition of ten thousand prayers."

I shall in this article treat of the cultivation of madder. The consumption of it is very large, and would require many thousands of acres to supply the home market. I believe the cultivation of madder has been successfully prosecuted on a small scale, in the neighborhood of Utica, State of New York, for some years past. About the year 1816, I bought some dried roots in the market of Cynthiana, Kentucky, that I found of very good quality. I have tested some roots brought from South America, where, I am informed, it grows wild, and it proved superior to any European madder I ever used. Mrs. Madison made a report to the Philosophical Society of Philadelphia, many years since, on madder raised under her direction, and the report was accompanied with a sample of cotton dyed an Adrianople red, that has never been exceeded in color by any European dyer.

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* NOTE.—We must explain that the term "harsh" by our correspondent, is not used here in an invidious, but a *technical* sense.

D. Ambourney informs us that the roots taken from the ground and washed, will, by using four pounds for one, produce all the effect of the best prepared. This fact is highly important to manufacturers, as it points out to them an easy and cheap way of obtaining the article for their own consumption, at less than half the price paid by them for the foreign article.

These facts will prove incontestably, that our soil and climate are admirably adapted for the cultivation of madder. The only impediment to our success lies in the fact that it requires from two to three years to realize a crop, and our farmers are ever impatient for quick returns. I shall commence by describing the mode of culture, and then give the process of drying and grinding for distant markets.

Preparation for the Crop.—It will be necessary to plow the land deeply for madder, before the winter, into high ridges, in order that it may be exposed to the action and influence of the frosts and the atmosphere. Early in the spring, these ridges should be well harrowed down by a heavy long-tined harrow, and then plowed again in the contrary direction to a good depth; and after this, when the land is not perfectly clean from weeds, or not rendered sufficiently fine and mellow, another plowing and another harrowing should be given. In the last operation, the ground should always be left in as level and even a state as possible. It is then ready for the reception of the plants.

Sowing and Planting.—The sets or plants may then be obtained either by sowing the seeds upon a bed of earth which is rich, and made perfectly fine by digging and raking in the spring, and then lightly covering it, or from offsets or suckers from the old plants. In the first method, on the plants appearing, they should be made perfectly clean by weeding, and to be set out at the distance of three inches in the beds by the hoe; in this way, by keeping the ground quite clean and well stirred about the plants, they will be ready to set out in the second autumn, though it will be mostly better to defer the business till spring. It requires about thirty thousand plants for setting an acre of land. The most suitable time for taking the sets is shown by the plants having attained the height of ten or twelve inches from the ground, and the suckers having thrown out fibrous roots from their bottoms. This may be seen by drawing up a few of the plants, and usually about the latter end of May or beginning of June. Besides, it is necessary that the sets shall have formed root-fibres at the bottoms, before they are removed, as where that is not the case, they never succeed well.

The land being prepared as directed, and the plants provided, a sufficient number of laborers are to be employed, that the work may be performed as expeditiously as possible. In taking off the sets much care is necessary not to injure them. The number of plants that can be set in a short time should be taken up at once. They should be prepared by having a third part of their tops cut off. A sort of thin batter should be made by mixing good vegetable mould and water well together, and as madder roots contain a large portion of free potash, I would recommend an addition of half a pound of potash to the batter used for the shoots, for every five pounds of fine mould; and this first dissolved in the water before mixing with the mould. Into this batter the roots and the sets should be well dipped before they are placed in the earth, as by this means the necessity of watering the plants afterward is prevented. This work is executed by a person before the planting commences. Two others are employed afterward in distributing the plants, so as to be convenient for putting them into the ground.

These sets, after the land has been formed into beds, five feet in breadth, with two feet between each for intervals, are put in by means of a line and a dibble, beginning at a distance of six inches from the outside, and setting a row of plants at a distance of five, six, or more inches from each other; then removing the line two feet farther on them, and putting in another row, and so on, till the bed is finished. In this way each bed contains three rows of plants, at two feet distance each.

After Cultivation.—As some of the plants are liable to die soon after the work has been performed, it is necessary, in the course of two or three weeks, to look over the ground, and put fresh vigorous plants in the places where the others have been destroyed.

It is of the greatest consequence to the growth, that it be kept perfectly clean from weeds, and that the mould be occasionally stirred about the shoots of the plants.

The insect about which our correspondent inquires below, was formerly quite common and very destructive among our conservatories in this city and Philadelphia, and we are indebted to Mr. George C. Thorburn for the following remedy, which has invariably proved effectual here.

Wash the whole of the bark and branches of the orange-trees with a strong decoction of ley and soft soap. Apply it with a stiff finger-nail or other convenient brush, manageable with the hand; after which, syringe the tree freely with clear water through a powerful green-house hand syringe. By continuing the syringing two or three times a day for a week, you will get completely clear of them; and by an occasional syringing, they will never again be troublesome. These insects, as well as the red spider, are effectually routed by free watering of the leaves and bark of the orange trees.

For the American Agriculturist.

REMEDY FOR THE COCUS ON ORANGE TREES.

***St. Augustine, East Florida, March* 8, 1842.**

To the Editor of the American Agriculturist,

Sir: I am now cultivating a somewhat extensive grove of orange trees in this city and vicinity, and am very desirous to obtain information from you, as to an effectual antidote for a very destructive little insect, called the cocus, which has been for the last two or three years injuring, and nearly destroying, in some cases, our orange trees. I send you enclosed a piece of the orange bark, covered with the insect. It inhabits the long shell or house adhering to the bark, and is so small as to be imperceptible to the naked eye, but is seen by the magnifying glass in great numbers and in lively mood, in the months of April and May. They multiply very rapidly, till they cover all the smaller branches of the orange and its leaves, and soon kill the upper parts of the tree. They threaten the entire loss of this our most valuable production, (just recovering now from the great frost of 1835,) unless we can find a remedy.

We have thrown dry ashes and lime over the trees when wet,—whitewashed, and once applied whale-oil soap, at the rate of 2½ lbs. to 16 gallons of water, and in some cases, have added to the wash 2½ lbs. sulphur and 2½ oz. nux vomica. None of these applications seem to be effectual except the last, which had some influence in checking them. You will confer a favor on me and on this whole community, as well as South Carolina, Georgia, and the West Indies, (for they all suffer from the same insect,) if you can give us information of an efficacious remedy; and in return for such, we should no doubt soon be able to send to you forty shiploads of our most delicious and valuable fruit.

Yours, very respectfully,
Franklin Y. Vail.

For the American Agriculturist.

STANDARD OF CHARACTER FOR PRIZE CATTLE.

Mr. Editor—Sir: It is generally understood, I believe, that the object of offering prizes for the best stock, by the State Agricultural Society, is to collect together animals from different sections and from different herds, that a comparison may be made by placing them side by side, that their merits or demerits may be fairly tested. A farmer, living in a remote section and not in the habit of visiting, except in his immediate vicinity, may suppose that he possesses the finest animals in the country, which is very natural, as he has probably never seen any better or perhaps equal, and his being much superior to those of his neighbors, he rests perfectly contented. This I consider a very dangerous situation for a breeder to be placed in. It is only by comparison that his eyes will be opened, or that he can be convinced of his error; when by ocular demonstration, the defects of his animals will be so apparent, that he will return home with a determination to improve, until he shall arrive at the acme of excellence.

These exhibitions are a school for the novice, the young, and inexperienced. Here they not only find some of the best animals in the state, but they meet gentlemen from all parts, interested in the same pursuit, hear the different opinions, and see the good and bad points pointed out, which perhaps heretofore had escaped their notice.

And now let me ask, how many of those persons generally selected as judges of stock, know what points are necessary to constitute a perfect animal, or one that approaches nearest? I must confess my own ignorance, and seek for information. At present, there is no rule or criterion for the government of the committee, and they are left to decide according to their whim or caprice. We want enlightenment on that subject; and for that purpose I coincide with the suggestion you made, page 140, Vol. I. of your paper, that the "chairman of each committee mount the rostrum, the animal or manufactured article be brought out before the public, and then the explanations for their decisions be set forth at large."

"What a school would this be to the rising and ay to the risen generation. A person might learn more by attending one such day's exhibition and explanation, than from studying books, and plates, and animals, unaided by the opinions of others, for a month."

As the awards and the reports are now made out, we are left in the dark, and drive home our animal, without knowing why he was or was not successful. The writer speaks feelingly on this subject, as he exhibited an animal last fall, in the first class of bulls, to which was awarded the third premium. One of the committee was asked where his bad points were, or why he was placed third? The answer was, that his head was short, and *his horns a little too long!* Now this was news to me, and *my eyes were opened,* for I must confess I had not noticed it before; and I returned home with a determination, that if ever I exhibited him again, I would saw off his horns: but this or something else so affected the animal, that he sickened and died in less than one month afterward!

At the annual meeting of the N. Y. State Agricultural Society, in January last, the writer called attention to the propriety of "erecting a standard of character for every class of stock to be exhibited hereafter for prizes; and also a standard of form, and every point necessary to constitute a perfect animal, to be noticed according to its influence in the decision of the judges."

This excited considerable interest, and some debate as to the manner in which it could be effected, and finally resulted in the following resolution offered by Mr. Rotch:

"Resolved, that the executive committee be requested to call a meeting of breeders, at such time and place as they may deem proper, for the purpose of discussing the different points of merit in domestic animals, with a view of arriving at some definite opinion as to the points most desirable to be attained in breeding."

As this subject is not only a very interesting but a very important one, and requires some agitation, I am induced to throw out the following hints, and solicit others to give their ideas and opinions upon it.

We will suppose, for example, that the following should be agreed on as the points of horned cattle for comparison, and that *the animal* combining or possessing the greatest number of these points, shall be deemed most meritorious.

1. Head small with a bright and prominent eye.
2. Horns small and tapering.
3. Neck small at the junction with the head, and gradually thickening to the shoulders.
4. Brisket broad, deep, and projecting well forward.
5. Shoulders full and no hollow behind them.
6. Body deep, round, and capacious; back straight.
7. Loins broad, and wide between the hips.
8. Legs short, full, and muscular above the knee —small below.
9. Flanks well let down.
10. Tail set on even with the line of the back, small and tapering to the end.
11. Broad in the twist, and if a cow, large milk veins and capacious udder.
12. Though last, not least, soft silky hair, thin skin, and good handling of the flesh.

Other points might be given, but the above will exemplify my ideas on the subject.

Truly yours,
C. N. Bement.

Three Hills Farm, March, 1843.

The soil in the country from which the letter below is dated, and in fact, in quite a district of country around, is exceedingly fertile, and somewhat peculiar. It is found, upon strict analysis, to be totally destitute of silex; plows, consequently, of the least roughness of mould-board, clog badly in the soil, and do their work imperfectly. Wrought-iron shares, polished in the finest manner, are most used, and found to work easiest and best. We make these observations, in order that Mr. Williams may be properly understood by those settled on different soils, where a rough cast-iron plow works as well as any other.

For the American Agriculturist.

A WORD ON KENTUCKY PLOWING.

Centreville, Ky., March 20, 1843.

Let the plow be the best that can be had, one that runs steady and deep, freeing itself well from the mould, and casting off all litter and stubble with ease. The rounded plow is the best in use here—the diamond next. No plow can work well if it is not as bright as a dollar, and one that will not become bright is a nuisance. Let the team be strong and steady, in good heart, and true to the rein. Do not use double trees (they are too heavy) or chain stretchers. Use the stretcher made from rod iron, having an eye in the centre, by a twist in the rod, to receive the clevis, and a link at each end for the cross piece. This enables the plowman to give his team as short a draught as is desirable. Do not plow in depth less than four inches, and as much deeper as the plow and team will work. Let there be no stops in the labor, except such as necessarily occur and such as can not be prevented. A team properly cared for, will keep in heart through the plowing season, with *three* rests in a day, and these are necessary, and no more. One at mid-day to water, feed, and curry; one at mid-morning to water; and one at mid-evening for same purpose. These last are positively necessary in warm weather, but need not occupy more than fifteen minutes. The plowman should always hold his plow steadily and walk in the furrow.

Plow from the *middle* of the *land* out. The usual mode is to plow from the *out edge* of the land to the *middle*. In plowing from the *middle, out*, the team must at each *end* be turned to the *right*. In following this course two things are gained: 1. The team has firm ground on which to turn, and is not fatigued by having plowed land to turn on. 2. The plowed land is not trampled by the team being turned on it. In plowing from the out edge of the land to the middle, the team is unnecessarily fatigued by turning on plowed land, and the plowed land is so much trampled as to require a second plowing. Try this; if you have not heretofore practised it, it will be awkward at first, perhaps, but when you adopt it once, you will not be apt to abandon it. These remarks have reference to stubble land, not to sod,—though to some extent they are applicable to sod land.

Geo. W. Williams.

For the American Agriculturist.

HORTICULTURAL CALENDAR FOR MAY.

During the past month, there has been much wet weather, and the ground having become fully saturated, vegetation is advancing with great rapidity. Those, therefore, who may not have had opportunity or leisure to attend to the suggestions of last month's calendar, will be compelled now to redouble their exertions.

Kitchen Garden.—In the fore part of this month all the early cucumbers, melons, cabbages, cauliflowers, lettuce, radishes, &c., which have not been taken out of the hot bed, should be removed and transplanted into the open ground.

The Seeds.—All kinds of table vegetables, such as peas, beans, beets, onions, parsnips, carrots, and esculent herbs, should be sown early. Tomatoes, egg-plants, peppers, &c., can also be planted out.

Fruit Garden and Nursery.—All kinds of fruit and forest trees and shrubs that have not leaved out, should be transplanted immediately. Spring inoculating may still be performed in the early part of the month. Strawberry beds may also be planted out, and the suggestions in the April calendar for pruning be observed.

Ornamental Grounds.—The borders of the flower garden should be finished, and perennial herbaceous plants transplanted. Sow seeds of autumnal flowers in seed beds, to be transplanted at a future time. Set out box edging early in the month, or it will be liable to suffer from the drought. Trim hedges and shrubs. Give the lawns and pleasure grounds a top dressing of ashes or stable manure, and put the gravel walks and carriage ways in order.

S. B. Parsons.

FOREIGN AGRICULTURAL NEWS.

By the Steam-packet Britannia we have our files of European journals up to the 4th of April.

Markets.—Cotton, 60,243 bales had been received at Havre, 290,000 at Liverpool during March, yet notwithstanding this large quantity and the great excess of importation into these ports over that of last year, the price has slightly advanced within a few days, and it is the general opinion that it can not go lower. The week previous to the sailing of the packet, 23,000 bales out of the large sales had been taken on speculation. Grain and Flour still continue dull. Pot and Pearl ashes were brisk. Lead dull—Turpentine difficult of sale—in Provisions a large business was doing, and more extensive sales looked for the present month. Cheese rather retrograding. Tobacco no material change. Tallow higher. Upon the whole, a decided improvement had taken place in trade, and a continued increase of commercial prosperity is predicted.

Money.—There is no change in fiscal affairs since our last, and capitalists find much difficulty in investing their money, even at the lowest rates of interest. The Britannia has brought out upward of a million and a half of gold.

The Corn Laws.—The British Government proposes to introduce a bill on this subject after Easter, which will probably be quite as favorable, if not more so, than the present tariff. In the meanwhile, all manufactured flour in Canada from grain grown in the United States, is received in England at the lowest duties as colonial produce.

NEWSTEAD ABBEY.—(FIG. 13.)

Seat of the late Lord Byron.

We present to our readers a front view of Newstead Abbey, the late residence of the celebrated poet, Lord Byron. We look upon this building as a rare gem of architecture, and well worth the study of country gentlemen in the United States, who wish to build on rather an extended scale. The front, partly enveloped in the "ever ivy green," is at once noble, rich, and beautiful, and can not but command admiration. Byron described the Abbey, as

> "An old Monastery once, and now
> Still older Mansion—of a rich and rare
> Mixed Gothic.
> Embosomed in a happy valley,
> Crowned by high woodlands."

Heating Conservatories.—By means of a stove 1 foot 6 inches square, and 3 feet 9 inches in height, and two copper cylinders of the same dimensions, containing boiling water, a conservatory 67 feet long, 27 feet wide, and 21 feet high, is sufficiently well heated, with a consumption of only one bushel of coke per day.

Paulowina Imperialis.—This beautiful shrub has proved sufficiently hardy in Paris to stand the winter, and it flowered in April. The flowers are of a fine blue, somewhat like those of *Gloxinia Caulescens*, and they have an agreeable smell like those of the *Philadelphius*. It has become so abundant now, that the price has fallen from 5 guineas to 2*s.* 6*d.* It is said that commercial gardeners have made more money by it, than from any other plant known.

Remarks on the laying out of Cemeteries, and the Improvement of Church-Yards; forming an octavo pamphlet of 130 pages, with above 50 engravings, has recently been published by Mr. Loudon. It is a work well worthy the attentive perusal of the American reader, for as a people, we are shamefully deficient in a proper care of these sacred grounds.

To prevent Mice from destroying early-sown peas.—Take a few small slices of bread, and dust a little arsenic on them. Place these slices on different parts where the peas are sown, and cover them over with pots or anything, so that nothing but the mice can get to the bread.

We think this would be an excellent plan to adopt to destroy mice in the winter harboring round fruit-trees.

Use of Charcoal in the Culture of Plants.—Almost every foreign agricultural publication that we take up is teeming with articles upon this subject, and from numerous experiments by the Abbè Piecone, he proves it without doubt an efficacious manure. It consists principally of oxyde of carbon, the primary element of vegetable productions. It is also found an excellent preservative from drought, and is sought for with avidity to spread upon ground liable to be burnt by the sun.

Mr. Partridge, of this city, in one of his articles on city manures, which appeared in our December No., pointed out the use of charcoal and the waste of it here. When the value of such things becomes better known and appreciated among our farmers, we trust that our corporation will be able to receive $64 500 per annum, rather than pay it out for the sweeping of the streets and carting away the offal. Several of the cities of Europe obtain considerable incomes from these sources; and we believe that our sister city of Boston, in Massachusetts, also does the same.

Preservation of Grapes.—Cut the grapes from the vine, with one or two joints of wood from below the bunch, and apply hot sealing wax to the end when cut off, and seal it closely, so that no air can enter into the tissues communicating with the bunch. They must then be hung upon suspended cords in a cool airy room, taking care that they do not touch each other, and are not exposed to currents of warm air, nor where it is so damp as to cause mould, and they will thus keep for months.

The American Agriculturist.—We observe our paper regularly advertised for sale in London, and we have already received several subscribers from Great Britain and on the continent, and are promised a considerable increase to our list as soon as the work becomes more known. We are certainly very grateful that our humble labors in the cause of agriculture should be so flatteringly appreciated abroad.

The Bott Grub, hitherto so destructive to cabbages, brocoli, and cauliflower, are effectually got rid of by simply soaking the seed in brine previous to sowing.

To destroy the Red Spider and other insects.—Steep a quantity of bruised laurel in water for a day, and forcibly syringe the leaves of any infected plant or tree with the liquid.

If our correspondent, Mr. Vail, does not find what we recommended, page 55 of this No., efficacious in destroying the cocus on his orange trees, he will do well to try the above. We presume the laurel recommended is the same as our own, that grows so abundantly over the whole country.

The Colored Embellishments of Paxton's Magazine of Botany for April, are *Lælia Acuminàta*, accuminated-lipped Lælia; *Hovea Pungens, var.* Major, pointed-leaved Hovea, large variety; *Lantana Crocea*, copper-colored flowered Lantana; *Ribes Albidum*, whitish flowered currant. The lantana is a rich, gorgeous flower, and the currant particularly delicate and pretty.

Mould or its Principles in the Juice of Plants.—Mr. Hermann, of Moscow, thus writes to the editor of the Journal of Pharmacy: "I have just made a discovery which will certainly prove to be of great importance in many respects, viz. that the chief part of the extractive components of the juice of plants, and therefore those of officinal extracts of plants likewise, consists of the principles of mould; and I distinguish in these juices the following substances in particular: humic acids, mould-deposite acids, apocrenic acids, crenic acids, and extratactive humus.

"This discovery will, I hope, decide the question at present so much agitated, on the nourishment of plants, as it is highly improbable that these mouldy substances contained in the juices of plants, should not have been absorbed from the mould earth (humus), but formed from carbonic acid, ammonia, and water, by the vital process of the plants."

Agricultural Chemistry rendered Simple for Practical Purposes, by Thomas George Tilley. Parts I. to IV. of this work are announced as already issued from the press in London.

Johnston's Lectures on Agricultural Chemistry, Nos. XXX. and XXXI. for April, treat of the use of vegetable and animal manures, and give 27 pages of experiments made with them upon different crops. These Lectures, and especially the experiments, ought to be in the hands of every enlightened farmer. They are of great value, and would be worth their cost to any one engaged in agricultural pursuits, ten times over every month of his life. We take pleasure in adding, that two volumes of these lectures have been republished by Messrs. Wiley and Putnam of this city, and that a third volume will be given by them as soon as all the parts necessary for it are issued from the English press.

The Ladies' Flower-Garden, by Mrs. Loudon.—Volume I. of this magnificent work is now completed. It is in quarto with XLV. superb colored plates, and letter-press to match; giving a history of the flowers figured, and the best method of cultivation.

Manure for Turneps.—Forty bushels per acre of common cinder ashes, mixed with three or four gallons of train oil is found to be an excellent manure for turneps.

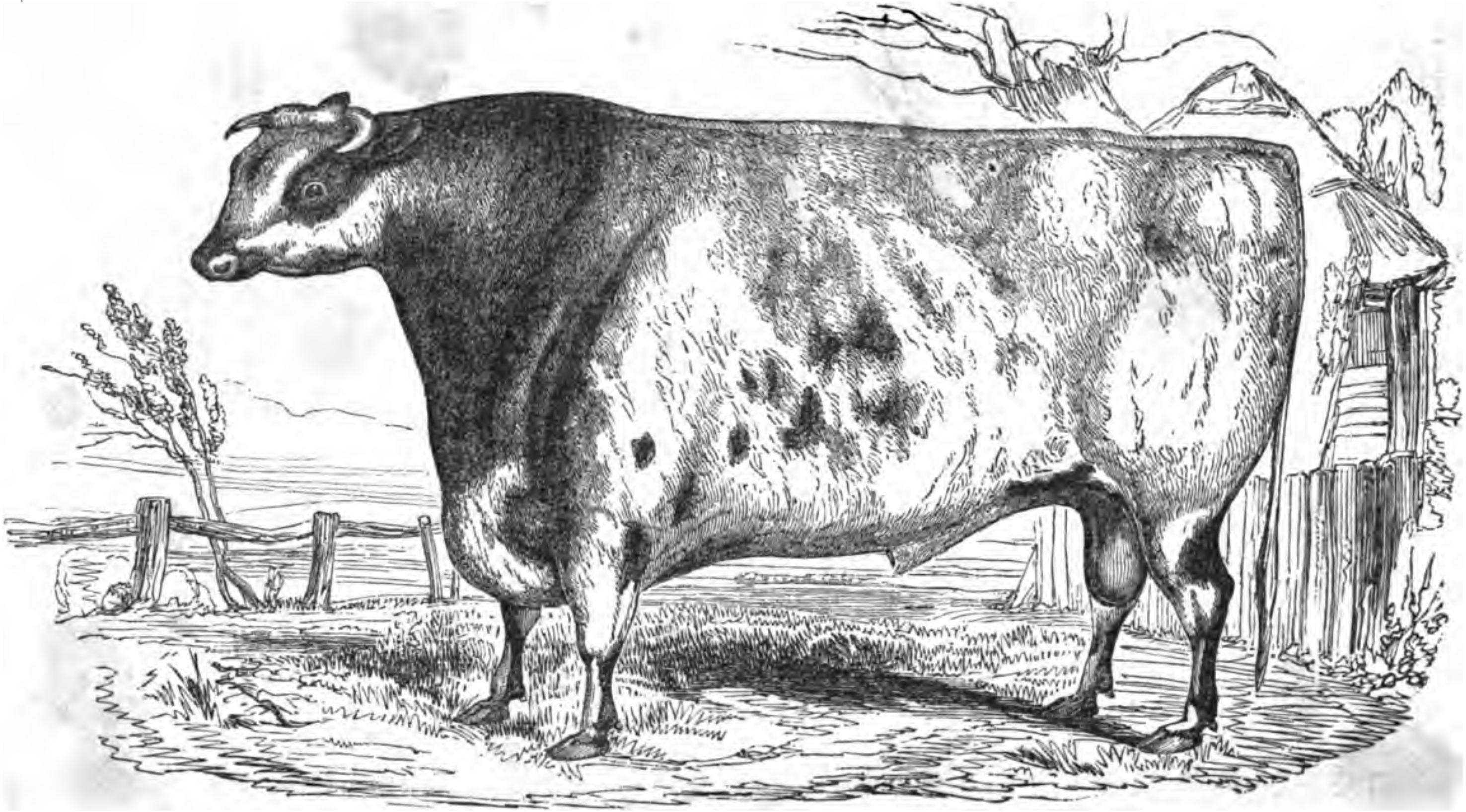
Common Salt for fixing Ammonia.—It is stated in the Farmer's Herald, that common salt scattered on the dung-heap has been found effectual in fixing ammonia, for it immediately unites with the carbonate of ammonia as it is formed, and a double decomposition takes place, producing muriate of ammonia and carbonate of soda.

THE DUKE OF NORTHUMBERLAND.—We have the pleasure of presenting to our readers on the opposite page, another portrait from the celebrated stock of Short-horns, belonging to Thomas Bates, Esq., of Kirkleavington, England. The pedigree of this animal is of the deepest kind, and his appearance is equal to his breeding. The artist has hardly done him justice in the loin and quarter, but his beautiful, fine, masculine head, wide, deep brisket, and round barrel, are to the life. His color is a rich roan, intermingled with a few patches of red and white. He is an animal of great presence and finished action, and upon the whole, the choicest bull we ever looked at. He has been repeatedly exhibited with his dam, Duchess 34th, at the great Agricultural Shows in England, and was never beaten.

Production of Fat and Muscle.—Mr. Karkeek, of Truro, delivered an excellent lecture on this subject before the Probus Farmers' Club. We see little, however, in it that has not been said before by Leibig, Boussingault, and one of our own correspondents, Mr. Lewis of Kentucky, in the April No. of this paper. We quote two paragraphs from the Lecture.

"All the carbon of the food, not consumed in the lungs, was actually used in producing fat, and that the amount of nourishment required for an animal must be proportioned to the quantity of oxygen taken into the system. And as air was expanded by heat, and contracted by cold, it was evident that equal volumes of hot and cold air must contain unequal weights of oxygen—*ergo*, a larger quantity of food is required

DURHAM BULL DUKE OF NORTHUMBERLAND.—(FIG. 14.)



The Property of Thomas Bates, Esq., Kirkleavington, England.

DESCRIPTION AND PEDIGREE.—Color roan; calved Oct. 15th, 1835; got by Belvidere (1706); dam Dutchess 34th (p. 356, Vol. 3d of Herd Book, and whose portrait was given in April No. of Am. Agt.), by Belvidere (1706); d. 2, Dutchess 29th, by Second Hubback (1423); d. 3, Dutchess 20th, by the Earl (1511); d. 4, Dutchess 8th by Marske (418); d. 5, Dutchess 2d, by Thelton 1st (709); d. 6, Dutchess 1st, bred by Charles Colling, by Comet (155); d. 7, by Favorite (252); d. 8, by Daisy Bull (186); d. 9, by Favorite (252); d. 10, by Hubback (319); d. 11, bought by Charles Colling, in 1784, the last of the Duke of Northumberland's celebrated stock of short Horns, by James Brown's old red bull (97) when animals were kept cold, than when they were warm. This was clearly explained by reference to the voracious appetites of the Arctic savages for train oil, tallow candles, and animal food, compared with that of the Hindoo, living chiefly on rice and vegetable food.

"The practical deductions which he drew from these facts, were the necessity of keeping animals warm, and perfectly quiet while in a state of feeding. The effect of exercise being to increase the circulation and quicken the respiration, and the consequent consumption of a greater quantity of food."

That animals as a general rule for a certain time, will fat faster without exercise than with it, we grant; but the meat is not near as lean and palatable; the animal also, as we have before stated, is always more or less feverish, and in fatting our own stock we have ever allowed them a moderate degree of exercise. This we contend is necessary to the production of good and healthy meat, and such as is most profitable for the consumption of man. It is a point that theorists in writing and lecturing almost invariably overlook, and the consequence is, that although they may benefit the producers of meat, they will do the consumers a great injury. Who would not choose at his table between lean, tender muscle, and meat more like untried lard, beef and mutton tallow, than anything else to which we can compare it. From the Reports of the Royal Agricultural Society councils, held in March, we gather some items.

Recipe for the Cure of Red Water in Sheep.—Take epsom salts, 6 ounces; nitre, in powder, 4 ounces; boiling water 3 pints, poured upon the salts and nitre. When milk-warm, add spirits of turpentine, 4 ounces; bole armenian, in powder, half an ounce. Mix and shake the whole well together when given. The dose is from three to four table-spoonfuls, and the sheep must be bled before administering the medicine.

Agricultural Tour in Spain.—Dr. Daubeny was to set out in a few days, on his tour of inquiry through Estramadura, and other districts in Spain, for the purpose of examining the phosphorite mineral, containing so large a proportion of the earth of bones, and making other agricultural observations.

Consulting Chemist of the Royal Agricultural Society.—Dr. Playfair is elected to this highly honorable and responsible office.

Alsike Clover, or Trifolium Hybridum.—This is a new kind of clover recently come into cultivation in a few instances. It is represented as throwing out an uncommon number of stems from the same root, as many as thirty in some instances, resembling those of the common red clover. The blossoms are of a pink hue, and it is thought to be a hybrid, between the white and common red clover. Others state that this clover is a native of Sweden, where it has long been cultivated, and that it has been known in Scotland since 1836. It yields well on good soils, and the peculiar merit claimed for it is, that it *withstands frost* better than any other variety. It is a perennial, sprouts rapidly after cutting, has a horizontal growth, and makes an excellent sheep pasture.

Bokhara Clover.—Specimens of this were exhibited nearly thirteen feet in length. It is a coarse weed, and notwithstanding the attempts to get it into cultivation among the farmers, it is generally condemned as worthless. See its identity with the sweet clover proved by Mr. Hepburn, page 149 Vol. I. of American Agriculturist.

Experiments with Guano.—Mr. Gibbs has furnished a valuable table of experiments with this manure in cultivating turneps. We have also received a tract of 36 pages, entitled "Guano, its Analysis and Effects Illustrated by the Latest Experiments," which will be at the service of such of our friends as wish to call and consult it. This tract comes as a sort of appendix attached to the London Farmers' Magazine.

To destroy Caterpillars on the Gooseberry-bush.—Make a strong decoction of fox-glove, or strong alum-water, and sprinkle on the leaves when they are dry. Another method recommended of guarding cabbages from the above, is to sow the borders of the field with hemp.

Will any of our friends at the west inform us whether the hemp crop is a preventive against the ravages of the army-worm, and will they make some experiments upon the subject?

To Kill White Worms among Cabbages.—Count de Gourcey, in his Agricultural Tour in England, states that Mr. Mure strewed a bed of cabbages with nitrate of soda after a rain, and the ravages of these insects immediately ceased.

THE LONDON FARMERS' MAGAZINE for April, we find much more spirited than that for March, and the editor continues in it the translation of Count de Gourcey's Tour as above. It is an interesting part of it; but we are sorry to see such statements as he makes of cows giving 38 to 45 quarts of milk per day, for *months in succession*. Mr. Fandley, of Maybole, must have been gammoning the Count, or the Scotch quart is of a very different dimension from the English beer quart, which is the standard in England and this country for milk measure.

Asparagus.—In the Gardeners' Chronicle we see it stated, that asparagus is grown in Germany of great size, white and very tender, and to produce it, the following mode of treatment was adopted: As soon as the young shoot was perceived issuing from the ground, a piece of hollow reed, cane or elder, about eight inches long, and of sufficient bore, was stuck down into the clay above the shoot, for the latter to grow into. The longer and wider the joints of the tube, the greater was the success. The asparagus, when it had filled the tube, was cut, and proved excellent and of an enormous size. A number of common flower-pots placed over asparagus beds, produced shoots of great size, perfectly white and particularly tender. In some instances, where the pot was not sufficiently high for the growth of the shoot, when it met the bottom of the pot, it coiled itself round, but still continued close headed, and did not branch out, or become hard. Tin tubes answer the same purpose, and joints of the bamboo are perhaps best of all. The tenderness of the plant arises from the exclusion of light, by placing over it an opaque hollow tube.

Falstaff Raspberry, is highly spoken of, as a very superior kind.

White Carrots.—The cultivation of this root is attracting considerable attention among farmers in England at present, as well as in this country. It is stated in some instances to yield 30 tons to the acre. Lord Ducie regularly obtains an average of 24 tons to the acre; and Mr. Harris estimates the tops to be equal to a second crop of clover. It has been common in Flanders and Germany for two centuries.

Early Vetches.—A kind of vetches is now grown at Isley, that were so early last year, as to be three feet high in the beginning of May.

THE BRITISH FARMERS' MAGAZINE FOR APRIL, is replete with excellent articles; and among others, it gives an abstract of several pages of Mr. Ruffin's Essay on Calcareous Manures. It also quotes three articles of some extent from the American Agriculturist.

Editor's Table.

NOTICES OF THE PRESS.

Cottage Residences, *or a Series of Designs for Rural Cottages and Cottage Villas, and their Gardens and Grounds. Adapted to North America by A. J. Downing.*—We acknowledge the receipt of the above beautiful volume from the author, and can not but express our unfeigned delight at the publication. We know of but few things which require a greater reform, than the buildings of the country gentlemen of these states. We do not mean by this, that we are destitute of comfortable and handsome residences the country over; but what we mean to assert is, that they are too much on the same plan, so that when the traveller has seen a few towns in America, he has seen all. As a general rule, also, our architecture is too *tawdry* entirely, and comfort is not unfrequently sacrificed to show. Another great deficiency about it is, that if the plan of the house be a good one, it is generally marred by the appendages of kitchens, wood sheds, and other outbuildings; whereas, all these should be contained within the main building, and thus leave it surrounded by fine grounds, and presenting a handsome front on every side.

Mr. Downing has fortunately deviated from the general routine of American architecture, and has come out boldly in favor of the old English; and we know of few more beautiful designs, to our taste, than he has given in this elegant work. They are ten in number, each occupying a leaf by itself, and executed in the finest style. Aside from these, the body of the work is illustrated with 80 very neat wood cuts. As an example of one of the most tasteful of these cottages, and to show our estimation of the work in question, we have taken the liberty of nearly imitating that of the design of plate II. in our vignette—and a beautiful Gothic thing it is too. We like the author's remarks generally on architecture, the laying out of grounds, and the disposition of trees and shrubbery, and we bespeak for his publication the attention and favor of our countrymen. In addition to the numerous engravings, it is got up in the very best style of the typographical art, in imperial octavo, 187 pages. Price $2 50. Wiley and Putnam, publishers.

Mr. Downing's work on Landscape Gardening and Rural Architecture is entirely out of print, a large edition having been disposed of in two years; and we have no doubt this last will be in as great demand.

Travels in the Great Western Prairies, *the Anahuac and Rocky Mountains, and in the Oregon Territory, by Thomas Farnham, Esq.*—We are indebted to the author for a copy of the entertaining and instructive work above; and when received, it was our intention to have given copious extracts from it, regarding the natural productions and great capabilities of this far-off section of our territory; especially since the recent movements making toward it, by considerable bands of hardy pioneers, who now propose examining the country, with a view of permanent settlement. Want of space, however, compels us to forbear till another month; and we can only add, that it is printed as an extra Tribune, 112 pages, double columns, octavo, and is sold at the low price of 25 cents. Greely and McElrath, Publishers.

Ellsworth's Report. *The Improvements in Agriculture, the Arts*, &c., in the United States; being an account of recent and important discoveries and improvements in the mode of building houses, making fences, raising grain, making pork, disposing of hogs, making lard oil, raising silk, with engravings of improved plows and other agricultural implements, &c. By Hon. H. L. Ellsworth, Commissioner of Patents.—This is another of those publications from which we intended to have made extracts for the benefit of our readers, but can not at present; nor is it so necessary now, since the same publishers as above have issued it as an extra Tribune, for 25 cents. We trust that all who take the least interest in agriculture, will immediately possess this work, and peruse it for themselves. Few are doing more for the benefit of this great cause than Mr. Ellsworth; and we tender him our best thanks for his able and most excellent Report.

The Mother's Journal.—We are indebted to the fair authoress, Mrs. Eliza C. Allen, for the first four numbers of Vol. VIII. of this excellent little periodical. It is published monthly, at Utica, by Bennet, Bachus, & Hawley, at one dollar a year, in advance; each number containing 48 pages of double columns, octavo, with a cover. It is got up in handsome style; and we think, from a rapid glance over its contents, that it is particularly calculated to benefit those for whom it is especially intended.

Leibig's Animal Chemistry.—The first edition of this profound work, printed as an *extra* New World, having been all sold, Mr. Winchester has now stereotyped it, and can hereafter supply any number of copies at 25 cents each. We are certain that the mere announcement of this fact to the public, will ensure for this cheap edition a large sale.

The Zincali, *or the Gipsies of Spain*, by Rev. George Borrow, author of the Bible in Spain, is now stereotyped as an extra New World. Price 25 cents.

Another edition of the same work in larger type, is issued by Saxton and Miles. Price 31 cents. It is one of the most curious and interesting publications of the day.

The Encyclopedia of Geography, by Prof. Murray, assisted by several of the most eminent scientific men in England, is in course of republication in parts, at 25 cents each, by Lea and Blanchard, Philadelphia. It is the best and most able work of the kind on this subject. It will contain 1,900 pages, 1,100 engravings, and over 80 maps, yet the whole cost will only be $6 complete.

Prairie Farmer, *devoted to Western Agriculture, Mechanics, and Education*, published at Chicago, Illinois, and edited by John S. Wright; 24 pages, double columns, royal octavo, monthly. Price one dollar a year, in advance. This was late the Union Ag., and now appears in a much superior form, paper, and style of print; indeed, one of the handsomest agricultural periodicals of the day. It is edited with much spirit, and we hope that the western public will fully sustain the publishers in their enterprise; for every state wants and ought to support at least one good agricultural paper, to explain and show forth its peculiar system of farming.

Will the editor please send us the January No. of the Prairie Farmer, as it has not come to hand.

Johnson's Encyclopedia of Agriculture.—This able English work is now republishing by Carey & Hart, Philadelphia, to be completed in 16 Nos., at 25 cents each, or $4 for the whole, which is only one third the price of the English edition. It is cut down and added to somewhat, by the American editor, to make it more suitable for the farmers of this country. Five Nos. are already issued, but we have not had time to look over them sufficiently, to decide as to the ability and judgment of the editor and his undertaking. The embellishments are much superior to the original work; and we should think under any circumstances, it was well worth the price at which it is offered. It should be in the library of every farmer, it being particularly valuable as a work of reference.

Southern Cultivator, published at Augusta, Georgia, by J. W. and W. S. Jones. 8 pages quarto, semi-monthly. Price $1 a year. This is a new agricultural paper, of which the first 4 Nos. are at hand. It is got up in pretty style, and deserves encouragement at the south. We wish, however, that we could see more articles in it on the peculiar crops of this section of our country, in preference to the selections from northern papers. We certainly feel highly complimented by such selections, and if we spoke only in reference to our own interests, would advise a repetition of them; but we do not, and therefore we say, give us *southern* and not *northern* articles for our reading. Though no longer interested, we are not the less obliged to the editors by the flattering notice they give of a certain animal from these parts, recently shipped, Col. Bonner of White Plains. We are satisfied when got into condition, that he will prove all expected of him; or to say the least, his stock will.

Meteorology, comprising a description of the atmosphere and its phenomena; the laws of climate in general, and especially the climatic features peculiar to the region of the United States; with some remarks upon the climates of the ancient world, as based on fossil geology, by Samuel Forry, M. D., author of the "Climate of the United States," &c., with thirteen illustrations. This is another of those valuable works issued by J. Winchester, 30 Ann Street, as an extra New World. It contains 48 pages of fine double columns, and the embellishments are really neat and highly illustrative. This work of Dr. Forry is one of uncommon merit, and is prepared with great care, after years of study and labor. It deserves the serious attention of all engaged in the important study of meteorology.

South-western Farmer, published weekly, at Raymond, Mississippi, by N. G. North. 8 pages quarto. Price $3 a year. J. Jenkins, M. W. Philips, and N. G. North, editors. This paper commenced its second Vol. the 10th of March last. It has been edited with spirit and ability since its commencement; but it will now be more varied and interesting in its columns, since the addition to its editorial corps of Dr. Philips. We are almost afraid to speak of this gentleman as he deserves, in consequence of his being a correspondent of our own; yet a warmer or more enlarged heart, and one more devoted to the noble cause of agriculture, we do not know. We commence this month the publication of a series of articles on the cultivation of cotton, from his pen. They will be continued monthly, and probably extend to 6 Nos. before being completed; five of these we already have in hand, and we bespeak for them the careful attention of our southern readers, as Dr. Philips is a *practical planter*, a *southern-born and southern-educated* man. But we digress. We like the South-western Farmer for one thing particularly, and that is, it talks to us of *southern* agriculture; and for those here at the north who take interest in these matters, we shall be happy to forward their subscriptions to this excellent periodical. Will the publisher please send us No. 1 of current Vol., as it has not come to hand.

The Honey Bee, *its Natural History, Physiology, and Management, by Edward Bevan*, with 35 engravings on wood. Carey and Hart, of Philadelphia, publishers. 128 pages octavo. Price 31¼ cents. This is a fair average work upon the exhaustless subject of the bee, with better embellishments and more reading matter for the price, than any other within our recollection. We regret that the enterprising publishers did not issue it on better paper, and charge the difference of price on the cost of the work: the matter and illustrations are worthy of it.

The Medical News and Library, 32 pages monthly, double columns octavo. Price $1 a year, is a recent issue from the press of Lea and Blanchard, Philadelphia. It strikes us as a work of merit; and the articles are written in language so popular, that we recommend it with great pleasure to the attention of our readers. Health is important to all, and this little work gives excellent rules on this subject, and discusses the nature and causes of disease with ability. We shall be obliged to the publishers, by their sending us the first *three* Nos., and their continuing it in exchange.

Berkshire Hogs.—We clip the following paragraph from the Hamilton, Ohio, Intelligencer:—

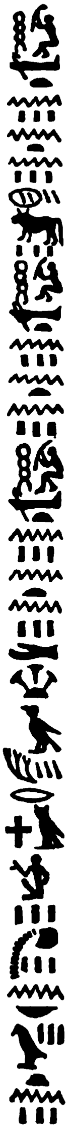
Many very fine hogs have been driven from various parts of the country; but pre-eminent among them all was a drove of 157 Berkshires, averaging 304¼ lbs. net, slaughtered by Thomas Millikin and packed by A. McCleary about ten day ago. These hogs were all bred and fattened by Cornelius S. Hagerman on his farm in Madison township, Butler county, Ohio. Twenty-five of them were only 16 months, and the remainder between 18 and 20 months old. For vigor, symmetry, fatness, and uniformity of size, they were pronounced on all hands the most beautiful and perfect hogs ever driven to this market.

ANCIENT EGYPT.

George R. Gliddon, Esq., late U. S. consul at Cairo, Egypt, and for twenty-three years a resident in that country, has recently published through the New World press, one of the most valuable and remarkable books of the age. It is no less than a detailed account of the process by which hieroglyphics have been discovered, classified, and translated: the results of such translation: fac-similes, to the number of several hundreds, of hieroglyphical letters and symbols, engraved in wood expressly for this work; together with translated tables of Egyptian chronology and a mass of well-digested historical facts, establishing the high antiquity of the pyramids, and corroborating the truth of biblical records, in a thousand interesting and striking particulars. As this book is sold for *twenty-five cents*, we take it for granted, that no sensible man in the country will fail to supply himself with it.

That the reader may have an idea of the above work, we give the hieroglyphics and translation of the most ancient threshing song known in agricultural literature.

A Threshing Song.



Tread ye out

for yourselves

twice (i. e. *bis*, meaning this sentence to be sung [twice)

O oxen

Tread ye out

for yourselves

Tread ye out

for yourselves

straw

for

men

the grain (a bushel pouring out grain)

who (are)

your masters.

Or paraphrased.

Hie along, oxen! tread the corn faster;
The straw for yourselves, the grain for your master.

To Correspondents.—M. A. Philips's articles on the cultivation of cotton, up to No. 5, are received with many thanks, and will appear monthly. Obed Hussey, D. S., Wm. Partridge, R. L. A., J. M. Sherwood, Dr. Cartwright, W. H. Sotham, Geo. W. Fahnestock, A. and G. Brentnall, J. R. Barbour, Americus, C. N. Bement, John J. M'Caughan, in our next.

We are in receipt of numerous letters from different parts of the United States, all complaining of the hard winter, late spring, loss of stock, great scarcity of forage, &c., &c. Such communications are valuable to us, and we are always obliged to our correspondents for them, although we may not at the time have space for their publication.

S. S. Full-bred Merinos are best for your purpose.

J. B. Mr. Bement has the cuts, and we shall address him upon the subject.

SIDE-HILL PLOWS FOR SALE.

BARNABY & MOOERS'S Patent Side-Hill and Level-Land Plows can be had at the following prices, viz: No. 2, wt. 45 lbs., $8: No. 3, 70 lbs., $10; No. 4, 80 lbs., $10 50; No. 5, 90 lbs., $11; extra edges, 50 cents. For colter, if added, laid with steel, $2; and wheel, $1 50; shin-pieces, 12 1-2 cents.

We give a few of the premiums awarded this superior plow, viz: by the American Institute, at their plowing-match at Newark, N. J., in 1840, the 1st premium—a silver cup. Also, by the same Institute, at their Annual Plowing-match for 1841, at Sing Sing, N. Y., a gold medal, for the best work done, lightest draught, and best principle of construction, answering for "general purposes." The 1st premium of the American Institute for 1842, and the 1st at Philadelphia the same year, and all the premiums in Tompkins county, as well as that of the New York State Agricultural Society, which awarded it an honorary premium of $30, and equal to the 1st at their Annual Plowing-match at Syracuse, for 1841.

The following are its advantages over the common plow, viz: 1st. Ease of draught. 2d. Perfection of work. 3d. Strength and durability. 4th. All dead furrows may be prevented, as the furrows can all be turned one way. 5th. Any width of furrow may be turned, between 8 to 18 inches, by moving the catches in the cross-piece, toward the handles for a wide furrow, and toward the centre for a narrow one. 6th. Placing the beam in the centre of the cross-piece makes it a "*double mold-board plow*," turning a furrow both ways at the same time; answering for green-ridging, plowing between corn or potatoes, or any crop cultivated in rows or drills, and for digging potatoes.

Orders for the purchase of Patent Rights, either by States or Counties, will receive immediate attention, and patterns of the various sizes furnished. Also, orders from Farmers, or others, for Plows, will be forwarded according to direction, to any place named, while the patent shall belong to me, if the money, or satisfactory references, are forwarded.

For further particulars, and cut of the plow, see Vol. 1 of American Agriculturist, page 370.

HENRY MOOERS.

Ithica, Tompkins Co., New York.

WHEAT-SHEAF FARM ON STATEN ISLAND FOR SALE.

A recent domestic bereavement has induced the undersigned to offer his residence on Staten Island for sale. It is situated midway of the outer bay, on the sea-shore, eight miles from the Quarantine ferry, three from that of Rossville, and equi-distant from two others—Seguin's landing, and Port Richmond.

The condition of the Farm, the extent, value, and practical usefulness of the improvements, and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upward each, including an appropriate allotment of woodland; each division offering a moderately elevated building location. The condition of the soil is well known to be in the best working order.

Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product.

W. A. SEELY,

New York, Feb. 16, 1843. 218 *Fulton street.*

SHEEP FARM FOR SALE.

The subscribers offers for sale, or to let, their extensive Sheep Farm, situated in La Salle county, State of Illinois. The Farm consists of upward of 1,500 acres; over 400 being enclosed by substantial picket-fence, and improved; the balance, dry rolling prairie, and timber, most admirably adapted to sheep husbandry, for which purpose it has been used by the subscribers for the last two years successfully.

The Flocks of Sheep can be sold at the same time, if purchasers are inclined. They consist of over 1,500 good, strong, healthy, white-faced Cheviot breed; also, three fine Pauler Merino Bucks, purchased of a celebrated breeder at the east.

If the Farm can not be sold for cash, offers will be received for renting the same for two or three years.

Apply either to JOHN ROSE, Little Vermillion, La Salle, MURRAY & WARD, Chicago, Ill., or JAMES MURRAY & Co., Buffalo, New York; either of whom will give every information wanted.

CHARLES STARR, Jr.,

MENDHAM, MORRIS COUNTY, NEW JERSEY,

Will be prepared, the coming Spring, to execute orders for thorough-bred Berkshire Pigs, from the imported boar Hagbourn, and a superior boar of Windsor-castle family, and fifteen choice sows, lately procured from A. B. Allen, of Buffalo, New York.

Pigs from this superior stock, from 2 to 3 months old, will be delivered, well caged, on shipboard, at New York, for $25 to $30 per pair. Feed furnished, when desired, at $3 per barrel.

Persons desiring either pigs or full-grown animals, can be supplied with all the advantages of Mr. Allen's stock at Buffalo, without incurring the risk and cost of canal transportation—the advertiser's residence being but half a day's journey from New York.

COMMERCIAL GARDEN AND NURSERY.

The proprietors of this establishment have constantly on hand an extensive assortment, comprising every desirable variety of Fruit and Forest Trees, Ornamental and Flowering Shrubs, Roses, Bulbs, Dahlias, and a large collection of Herbaceous Plants, which they are prepared to dispose of on reasonable terms with a liberal discount to the trade, and to wholesale customers. European Privet, of a superior quality, for hedges, will be furnished at reduced rates. Also, Evergreens and Ailanthus, the latter of a large size, suitable for street planting. 10,000 Norway Spruce of small size can be furnished at very reduced prices. Great care has been taken to select the best varieties of thoroughly tested fruits from the most correct sources, and it is the determination of the Proprietors to cultivate only those kinds which ample experience has proved to be of superior excellence, and to succeed well in this country. They are also particularly careful to take no innoculations of grafts from trees whose variety has not been ascertained and accurately tested by the fruit itself—the only mode in their opinion, of ensuring perfect correctness. The varieties of fruit being thus kept entirely distinct, the Proprietors feel no hesitation in warranting the identity of the kinds, and they are persuaded that those who purchase cannot but be satisfied with the quality, both of the trees and of the fruit.

Catalogues with prices will be furnished gratis at either of the above places.

PARSONS & CO.

Flushing, L. I., near New York, 4th month, 1843.

Prince's Linnean Garden and Nurseries, Flushing, near New York.

The following new Catalogues, 32d edition, of this immense collection of Trees, Plants, &c., will be sent to every post-paid application, and orders will be executed with despatch.

No. 1. Fruit and Ornamental Trees and Plants.
2. Bulbous Flowers and splendid Dahlias.
3. Green-house Trees and Plants.
4. Garden and Agricultural Seeds, with low wholesale prices.
5. Wholesale Catalogues for Nurseries, comprising Trees of smaller size.

Feb. 28, 1843. WM. R. PRINCE & CO.

N. B. 150,000 Mulberry Trees, 4 to 6 feet high, of the finest varieties, for sale at low prices and liberal terms.

POUDRETTE,

Of the best quality, prepared by the New York Poudrette Company, may be had *immediately*, in any quantity, in barrels or in bulk, on application to the subscriber. Price, $5 for three barrels, or $15 for ten barrels, or 30 cents a bushel, if measured into wagons or vessels at the yard. Letters, post-paid, containing cash, will be promptly attended to, if addressed to

D. K. MINOR, *Agent*,

March 10, 1843. 118 *Nassau street, New York.*

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnston's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo, $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, $1; Downing's Landscape Gardening, $3 50; Do. Cottage Residences, $2 50; Liebig's Organic Chemistry, $1 25; Do. Animal Chemistry, $1; Buel's Farmer's Companion, 87 1-2 cents; Fessenden's Complete Farmer, 87 1-2 cents; Cobbet's American Gardener, 75 cents; Blacklock's Treatise on Sheep, 50 cents; The American Farmer's Instructor, $1 62; A Treatise on Cattle, $2 50; Dana's Muck Manual, new edition, 62 1-2 cents; Boswell's Poultry Yard, 50 cents.

BEVAN ON THE BEE—CHEAP EDITION.

THE HONEY BEE; its Natural History, Physiology and Management. By Edward Bevan; with thirty-five engravings on wood. *Price* 31 cents.

THE RURAL AND DOMESTIC LIFE OF GERMANY, with characteristic sketches of its cities and scenery. By William Howitt. *Price* 50 cents.

AN OFFER.—VOLUME FIRST of the American Agriculturist, complete, with title page and index. *Price* one dollar, stitched. Bound in cloth, $1 25. Persons paying *two dollars*, may have the first volume in neatly-bound cloth, and the second volume in numbers, as published. SAXTON & MILES.

CHARCOAL & CHEMICAL MANURES.

The subscriber has 5 to 1000 bushels of fine Charcoal Screenings, which he offers for sale, at 12½ cents per barrel. He can also supply compound guano manure, and any of the other chemical manures, such as sulphate soda, sulphate of ammonia, &c. He will give estimates of cost of any composition that farmers may require for experimenting, &c., upon application, post paid. Engaged in the chemical manufactures for 30 years past, he feels confident of giving satisfaction in the articles ordered.

April 21. JOHN BARLING.

Commercial Works, Jane St., between Washington and West streets.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, APRIL 25, 1843.

ASHES, Pots, per 100 lbs	$5 12	to	$5 25
Pearls, do.	6 25	"	7 50
BARK, Quercitron, per ton	22 00	"	24 00
BARLEY, per bush	48	"	50
BEEF, Mess, per bbl.	7 50	"	8 00
Prime, do.	5 50	"	5 75
Smoked, per lb	6	"	7
BEESWAX, Yellow, per lb	28	"	29
BRISTLES, per lb	25	"	65
BUTTER, Table, per lb	13	"	15
Shipping, do.	5½	"	10
CHEESE, per lb	5	"	7
CLOVER SEED, per lb	8	"	9
CORN, Northern, per 56 lbs	58	"	59
Southern, do.	55	"	56
COTTON, per lb	5	"	9
FEATHERS, per lb	19	"	27
FLAX, per lb	7	"	7½
FLAX SEED, rough, per 7 bush	8 75	"	9 25
clean, do.	9 25	"	9 50
FLOUR, Northern and Western, per bbl	4 75	"	5 31
Southern, per bbl	4 25	"	4 75
Rye, per bbl	3 00	"	3 25
HAMS, Smoked, per lb	6	"	7½
Pickled, do.	4½	"	5
HAY, per 100 lbs	45	"	50
HEMP, Russia, clean, per ton	200 00	"	205 00
Kentucky, water-rotted, per ton	150 00	"	180 00
Do. dew-rotted, do.	100 00	"	120 00
HOPS, per lb	9	"	12
HORNS, per 100	1 25	"	5 00
LARD, per lb	5½	"	7½
LEAD, Pig, per lb	3½	"	—
Sheet and bar, per lb	4½	"	—
MADDER, per lb	10	"	13
MEAL, Corn, per bbl	2 75	"	3 00
Corn, per hhd	12 25	"	13 00
MOLASSES, New Orleans, per gal	19	"	21
OATS, Northern, per bush	25	"	27
Southern, do.	20	"	22
OIL, Linseed, per gal	85	"	93
Castor, do.	62	"	70
Lard, do.	65	"	70
PEAS, Field, per bush	—	"	—
PITCH, per bbl	1 25	"	1 37
PLASTER OF PARIS, ground, per ton	2 00	"	2 12
PORK, Mess, per bbl	9 00	"	10 00
Prime, do.	7 00	"	8 00
RICE, 100 lbs	2 13	"	3 00
ROSIN, per bbl	81	"	1 06
RYE, per 56 lbs	65	"	67
SALT, per sack	1 40	"	1 62
SHOULDERS, Smoked, per lb	4½	"	5
Pickled do.	3	"	3½
SUGAR, New Orleans, per lb	4	"	5½
TALLOW, per lb	6½	"	7
TAR, per bbl	1 25	"	1 37
TIMOTHY SEED, per 7 bush	16 00	"	18 00
TOBACCO, per lb	3	"	7½
TURPENTINE, per bbl	2 50	"	2 75
WHEAT, Western, per bush	1 00	"	1 05
Southern, do.	90	"	95
WOOL, Saxony, per lb	30	"	37
Merino, do.	27	"	30
Half-blood, do.	22	"	26
Common, do.	18	"	22

New York Cattle Market—April 24.

At market, 630 head of Cattle, fresh, (490 from the south,) 75 Cows and Calves, and 200 Sheep.

PRICES.—BEEF CATTLE remain in the same dull state noticed last week. We quote $4 50 *a* $6 50 as the range for good to prime; ordinary to fair $3 50 *a* $4; 125 unsold.

COWS AND CALVES.—Sales of 65 at $15 to $20 *a* $30, and dull.

SHEEP AND LAMBS.—All taken at $1 76 to $3 *a* $4

REMARKS.—Money is more abundant than ever, and good paper can be readily discounted for 4½ to 5 per cent. Stocks still advancing. U. S. Loan 6 per cent, 1862, we now quote 112 to 113. Other good stocks have advanced in the same proportion.

Cotton has advanced ¼ of a cent per lb., since the arrival of the Britannia, and an active business is now done in it—8250 bales were sold the past week. Flour and meal, in consequence of large expected arrivals on the opening of western navigation, are not so brisk. Wheat is scarce and much wanted—rye the same—other grain is plenty, and dull. Provisions generally in fair demand—choice mess beef much wanted. We are of opinion that prices will be maintained in most instances, and advance in others, and for further remarks on this subject, we refer to page 42 of this No. of our paper.

The spring still continues cold and backward, and most of the corn at the south has been cut off by the frosts, and must be replanted. We fear that this may prove the same at the north this month; and as the corn crop is a very important one with us, we hope that especial attention will be paid to the preparation of the ground, and the selecting of the earliest and best kinds of seed.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume 1 of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor, and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway, New York.

The Subscriber will attend promptly to the execution of all orders for the purchase of stock, seeds, agricultural implements, and books. He has been more or less engaged in mercantile pursuits in this city for ten years, and has an extensive acquaintance and thorough knowledge of business in general. Cash or produce must invariably be in hand, before the order can be executed.

A. B. ALLEN, 205 Broadway.

THE FAST-TROTTING HORSE BELL-FOUNDER

Will remain at his old stand, Middletown, Butler Co., Ohio, the ensuing season. He is a bright blood bay, with black legs, mane, and tail; is 16 hands high, and weighs 1,200 lbs. He has trotted his mile in 2 m. 45 sec., and, as a roadster, is unequalled. Several of his colts, just beginning to appear, have proved equal to himself, and have sold from $150 to $1,200. This stock is well adapted to the saddle, road, or farm-work, and, for utility, nothing is superior to them. Address Dr. A. Campbell, as above.

April, 1843.

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most
noble employment of Man.—*Washington.*

VOL. II. NEW YORK, JUNE, 1843. NO. III.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

THE DAIRY.

As this is the season of the year in which commences the laborious duties of the good housewife in the dairy, we have thought it advisable to call her attention to a better preparation of the articles of butter and cheese. In making butter, the essential requisites are, to preserve the utmost neatness and have everything sweet and cool; a fine quality of salt, and just enough of it for good taste and preservation, well worked in; every particle of the buttermilk worked out—not with the hand, as that softens, and consequently injures the butter—but with a wooden paddle. Thus prepared, butter will keep sweet a long time; bear transportation to a foreign market, and command an extra price. Very choice table butter is now worth 25 cents per pound in this market, and its average price, throughout the year, is about 20 cents, while the middling good qualities are worth only 13 to 15 cents. The same general observations of neatness, &c., may be made on the preparation of cheese, as we have given on that of butter, the choice kinds of which sell from 12 to 18 cents per lb. here, readily, while good ordinary quality is not worth over 5 to 7 cents. Of course, cheese at this high price is extra rich. It is put up in the common round shape, of about 14 lbs. weight, which is the most suitable size for family use. Each cheese has a canvass covering, and is placed in a wooden box by itself, and then put into casks, is thus sent to market, and arrives in the best of order. We do not enlarge upon this subject now, as it is our intention to soon visit the best dairy districts of the country, where we are promised all information regarding the most approved methods of making butter and cheese.

RAISING SILK.

We beg leave to impress upon our readers, the great advantage to the country and themselves, that will result from an indefinite extension of the silk culture in the United States. In the absence of a brisk demand and high prices for the ordinary objects of cultivation, we are confident no one article will pay better than the production of cocoons and reeled silk. We know that in Mansfield, Connecticut, and other places, where the raising of silk and manufacturing it into sewings, has been in existence for 60 years, many of the inhabitants have become comparatively rich by it, although the operations have been carried on in a very limited way. The citizens of our own state are doing very little as yet in this cause, notwithstanding the legislature has offered a satisfactory bounty on the production of the raw article, and have further set a laudable example by paying a fair price for cocoons, and commenced the manufacture of it in the state-prisons. It was computed that the amount of cocoons raised in Connecticut last year, exceeded 117,000 lbs., while that of our own state fell short of 4,300 lbs., and that too with a population eight times as large, and even a greater proportion of territory, and this far exceeding the former in fertility! We believe we are rapidly lessening this disparity, yet not so fast as circumstances would justify. We again, therefore, earnestly commend this subject to the attention, not only of the citizens of our own state, but those of every state in the union, satisfied as we are, that no branch of rural affairs will pay better to the country and the producers.

SKETCHES OF THE WEST.—No. I.

Cincinnati.—This is the largest and much the handsomest city of the west, and we think it is ever destined to maintain this rank. Its position seems to have been expressly made by nature for the site of some great town. It is a plain, nearly in the shape of a bended bow, a mile and a half broad in its widest part, and elevated about 100 feet from the water, terminated by broken ranges of picturesque hills from 300 to 400 feet high, the sides and tops of which, the town is already beginning to cover in broad terraces of brick and stone. On the top of one of these hills Mr. Longworth has had the liberality to make a large reservation for a public square, and if others can occasionally be appropriated and ornamented with trees, walks, and shrubbery, and proper attention be paid to the public and private buildings, it may in time become quite a magnificent city. It is surrounded by an exceedingly fertile country, and it has a very extensive trade, the most interesting branch of which to the farmer is the dealings in pork.

Pork Business.—In the January number of the Agriculturist, we gave some account of this, and the slaughter and packing houses; but the business done the present year is much greater than ever known before. It is estimated that upward of 250,000 hogs have been killed at Cincinnati the past season, with a greater average weight than any preceding year. Many of these were packed by English agents, sent out here expressly for this purpose, after their own method, for the market of Great Britain, the sale of which thus far has been quite satisfactory, and will prove encouraging for the pork-raisers of the west. In addition to the pork, great quantities of lard are put up here, 12,000,000 pounds at least the past year, worth nearly $500,000.

Stock.—Of swine, as a matter of course, in the neighborhood of Cincinnati, where so many hogs are raised, one would expect to find choice breeds; nor would he be disappointed, for in no district of country have we ever seen as good animals generally prevail. Sheep are kept in considerable numbers, but very few choice fine-woolled flocks; which we think a matter of regret, as the soil and climate are both admirable for the purposes of sheep-husbandry. Of cattle, there are many varieties, the best of which, undoubtedly, are the Durhams. Among these, the choicest herd within our observation was that of Mr. William Neff, kept on his farm situated on a fine Macadam road, about seven miles from town, and it was a great pleasure for us, while staying at Cincinnati, to often visit these superb animals.

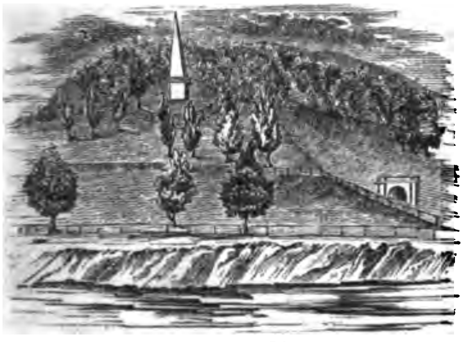
The herd is composed of a reserved lot, all imported, or bred directly by Mr. Neff from his own importations. The stock bulls are quite superior, and among them we thought most highly of Prince William and Young Prince. The cows also we found a choice lot, and no way inferior to the bulls. Those we most admired among the older ones, were Ruth, Profitable, and Princess, the first of which is a noted breeder. Of the younger ones, Victoria, Clifford, Georgia, and Louisiana, stood the highest in our estimation. The latter is a magnificent animal, and such as is rarely found. Everything for their accommodation is well arranged, and the stables, yards, and indeed all the appurtenances, could scarcely be bettered. Mr. Neff's swine are quite on a par with his cattle; he having the Berkshire recently imported in great perfection, and the English grazier, also imported, a nice, quiet, thrifty breed, and famous for making lard—a great desideratum now in the west. His piggery is extensive, and one of the best arranged we ever saw. The general plan is an alley in the centre, with ranges on each side for the animals; a cooking-house in front, where kettles are set, and bins formed conveniently around for the storage of meal, grain, and roots. Other things about this farm are worthy of notice, among which we shall not soon forget an abundant orchard and fine vineyard recently planted out.

Nurseries and Gardens.—These abound in the vicinity of Cincinnati. That of Mr. Ernest we found the most extensive. It is really well filled, and contains a numerous and excellent assortment. There are many gardens also, both public and private. Of the latter, that of Mr. Longworth is superior. Here are transplanted all the wild flowers of the country, for the purpose of experimenting with them, and we have no doubt some beautiful things will yet be brought out from this source.

THE OHIO.—How swiftly glides the boat down the broad winding stream; how beautifully the hills break and group again, from reach to reach in the blue distance, crowned with lofty forests, the branches of the trees dotted with thick green tufts of the misleto, while below from their base to the water's edge, spread the wide fertile meadows, in green grass or tall corn, with large herds of fat cattle feeding upon their rich herbage. Fair villas, substantial brick or stone farm-houses, and the humble log-cottage, are sprinkled alternately along, and from distance to distance, we are brought up to land by intervening towns and villages. It may be called, indeed, from its sources to its mouth La Belle Riviére, for there are few streams in truth more beautiful.

We recollect being often asked in England if we did not find the Thames much superior to the Ohio. The Thames indeed! It has a few fine meadows and gentle hills, and is as wide as the Ohio perhaps, 60 miles or so from its mouth to London, and then it rapidly dwindles to a mere rivulet, while this keeps rolling on for nearly a thousand miles in one continued flow of uninterrupted magnificence, wildness, and beauty.

NORTH BEND.—One of the most interesting places that we pass in descending the Ohio, is North Bend, 14 miles below Cincinnati, the residence of the late lamented General Harrison, and a green mound-like hill near to the house, enclosed in white palings, is now his final resting-place. (FIG. 15.) The tomb is of plain, solid marble, and accords with the character to whose memory it is erected, and the virtues and deeds that it is made to commemorate. When we last saw the Farmer of North Bend, he had been taken like another Cincinnatus, from his rural occupations and quiet, humble home, and stood amidst an admiring crowd of thousands, the acknowledged chief of millions of free people. To look upon that plain, simply attired old man, thus placed, thus surrounded, and thus honored, was a sight really sublime, and his sudden removal will long be mourned by a grateful nation.



TOMB OF GENERAL HARRISON.

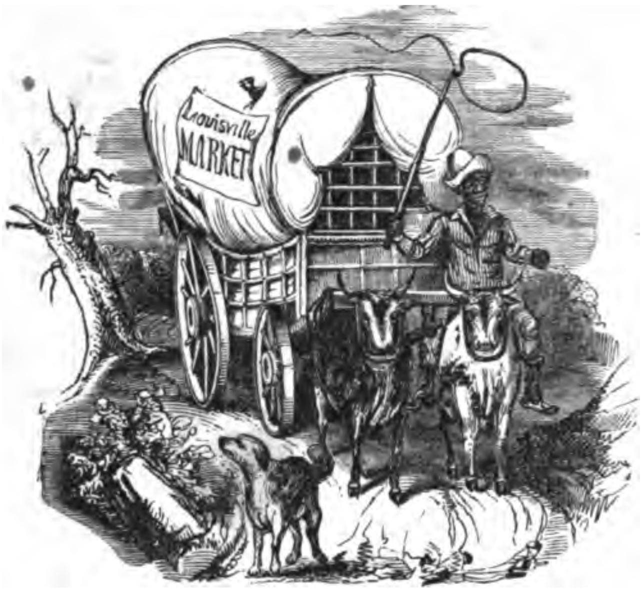
We wish we could see the miserable out-buildings in front and immediately around this charming residence of General Harrison removed. It has now become a point of national interest, and is always shown to strangers; there should be nothing therefore to mar the view, and we would respectfully suggest to the son of the late President, that the fine lawn in front of the house be disincumbered of all else, save the noble trees and flowering shrubbery that now adorn it.

LOUISVILLE.—This is a fine city, built upon a high level bank of the river, and is about half the size of Cincinnati, and laid out in the same manner, the streets crossing each other at right angles. It has some good buildings, of which the Court-House and new Methodist church are among the most elegant. The rapids of the Ohio here extend 3 1-2 miles, with a fall of 24 feet, over a solid bed of limestone. These are passed except in high water, through a steamboat canal of about two miles in length, cut through the solid rock, reminding us, though without the length and depth, of the deep cut of the Erie canal at Lockport.

Louisville has a considerable trade, and is pretty largely engaged in hemp manufactures, the whole process of which is by machinery, driven by steam power. It is said that the manufacturing of cotton bagging does not cost over three cents per yard. This may seem very cheap, but a single power-loom will weave 250 yards per day with one hand to tend it, and all the other operations are equally facilitated. With hemp at $3 per cwt., the manufacturer can successfully compete with the imported fabric, and even without a protective duty, will soon drive the foreign article out of the market.

CULTURE OF POOR SANDY SOILS IN KENTUCKY.—Journeying from Louisville to Frankfort, our attention was attracted upon the road to a burly-headed negro, with a long beard somewhat grizzled with age, encased in stout cow-hide boots, hickory-colored jean clothes, and a huge, white felt hat, the wide brim cocked up before and behind in military style, giving him a rakish and somewhat consequential appearance. He sat astride the bare back of the nigh ox of his team, hitched on to one of the smaller kind of Dutch wagons filled with corn in the ear, and topped off with vegetables, and fresh killed pigs, and poultry "fixins" of various kinds, bound for the Louisville market. He flourished a tall whip, which was as thick as our arm, and braided from hemp of some six feet length. He sat him well, with a jaunty air, and was cheering on his patient team by singing in a lugubrious tone, to the popular old negro air of "Long time ago," probably an improvisatrized song, every stanza of which, in order to take fresh breath, and give vent to the exuberance of his feelings, he wound up in a chorus of loud cracks of his whip.

(Fig. 16.)



Sambo.

"Den goin' down to Loudeville,
Long time ago,
Where all de wagons chucky fill
Stan' in a row;
Crack! crack! crack!

"Ob pig and turkey chicken big,
Long time ago,
Who neber more his foot he dig,
In garden ob Sambo;
Crack! crack! crack!"

Here the coach stopped to deliver a passenger, while another took the opportunity of questioning our ebony serenader.

"So then, Sambo, you have a garden it seems?"

"Yes, sartin, master give me garden, and one day a week to work him."

"And what do you raise there?"

Here he handed out sundry vegetables, and among others a huge carrot about as big as his leg from the hip down (not including his foot though), measuring it off with great pride.

"Pray how did you produce that?"

He placed his finger significantly upon his nose, and replied: "Master think him garden never grow nothin', poor dry soil; I wheel him on manure, I work him late, I work him arly."

As working "late and arly," as Sambo had it, when the dew is on the ground, is the very philosophy of tilling dry soils, and to our certain knowledge has been the means of doubling crops in several instances, without any addition of fertilizing materials, we began now to listen to the colloquy with great interest.

"Sambo, you are a genius to grow such carrots, a scientific agriculturist, did you ever read Davy or Tull?"

"Tull," he replied with a grin, "who be he? Dog that tree de coon?"

"Not exactly, but do you produce other vegetables equally large?"

Here he put his finger to his nose again. "Pa'snip in the spring—him grow a mighty smart chance all winter."

"Very well, Sambo, very well, indeed; but now pray tell me how do you contrive to make such fat luscious-looking poultry there, as I see in the wagon? I fancy that they did not grow in the same way that your carrots and parsnips have here."

"I reckon not ezakly," said he, and burst into a loud laugh, and commenced dancing all round the coach.

"Well, you foolish fellow, we must be off in a minute, here is a *bit* (a shilling-piece) now tell me."

Taking the money handed him, he turned up the whites of his eyes, and commenced: "Master's corn-crib purty handy I reckon."

"Very likely, but that's not all."

"Beef liber mighty plenty, and pork crackalins."

"I don't believe you."

"Roast him possum then, sweet taters, and—"

Here everything was ready again, and our impatient driver put up his horses without waiting for the cautious Sambo to finish his method of fattening fowls, and the last we saw of him, he was again astride his favorite ox, singing out at the top of his voice:–

"What now you ask de pound for coon?
Long time ago,
Ah, massa, cheap at picayune,
Times be so low.
Crack! crack! crack!"

Will any Kentuckian please to furnish us with the peculiar manner that the colored people so delicately fat their fowls, the knowledge of which, to our great regret, we were cut off from obtaining of the redoubtable Sambo?

SHOW AND FAIR OF THE N. Y. S. AG. SOCIETY.

In another part of this No. we have published a list of the premiums, &c., for the forthcoming Show of the N. Y. S. Ag. Society; and we must confess, that after all that has been said upon the subject of classification, and the great dissatisfaction it has given, placing animals together of distinct breeds, to be judged of necessarily by the same rules, that we are somewhat surprised the executive committee have not made a different arrangement. They might with just as much propriety have put long-woolled, middle-woolled, and fine-woolled sheep together, for there is scarcely any more distinction in these breeds, than there is between Durhams, Herefords, and Devons. Had the distinction asked for so often by the breeders of Herefords and Devons, been made, there would doubtless have been a good show of these animals at Rochester, next September; now the owners of the best herds declare, and as we think, in justice to themselves, not a hoof of theirs shall appear upon the ground; for shown against the Durhams, the latter must infallibly beat them. We must confess we think the arrangement a very unfair one: it is utterly discountenanced in England, and we trust that the committee will see the justice of reviewing their proceedings, and altering the list forthwith, so as to give the Herefords and Devons a chance among their own kin. We think, also, that the meeting is appointed at the worst time that it well could be; the 19, 20, and 21 September, are the very days, above all others, to expect an equinoctial storm. Were it not that the farmers are usually very busy in getting in their wheat, we should say that the 5, 6, and 7 September, would be the best time for holding the show; but in consequence of this, it might be advisable to delay till the 12, 13, and 14, but certainly not later. The committee should recollect, that from the position of Rochester, we may have a large number of Canadian gentlemen over, besides many from Ohio and the whole lake region; everything, therefore, should be so arranged, as to make the meeting pass off to the very best advantage. In connexion with this subject, we subjoin the following challenge:

To the Stock-breeders of the state of New York, or elsewhere.—I will enter for a sweepstakes, ten dollars entry, a three quarter bred Durham steer, 5 years old in May, 1843, fed while a calf on skimmed milk, and poorly at that, and after three months old, with nothing but grass and hay till three years old, and since then wintered on straw. He has never been fed a bushel of grain or roots, and has run out doors. I will show him against any animal of the *common* breed at the State Fair, in Rochester, in September next, to *prove* that *grade* Durhams will bear hardship and rough keep equal to the native cattle, and retain their superiority of points. He was got by a thorough-bred Durham bull.

I will also show a 2 year old thorough-bred Durham heifer, kept in the same manner, except sucking her dam for four months, which run out in the straw yard through the late severe and long winter, against any *native* heifer of like age, for the same purpose and for the same sum—both animals to be judged by one of the cattle committees selected by the Society.

Any person wishing to compete with me in this challenge, will send notice to Luther Tucker, Esq., secretary of the society, Albany. It is understood that no animal thus exhibited, is to be fed anything but grass in good pasture. L. F. Allen.

Black Rock, May 9th, 1843.

SIMPLE DIRECTIONS FOR THOSE EXPOSED TO COLD AND WET.

The danger incident to excessive exposure to cold and wet, to which the laboring classes are liable, might be obviated by moderate attention to a few simple rules, if observed faithfully, immediately after such exposure. This is a matter, which, however apparently trivial it may appear to some, involves much of human comfort. We have been close observers on this subject, and much exposed ourselves in a variety of climates, and can therefore speak from experience.

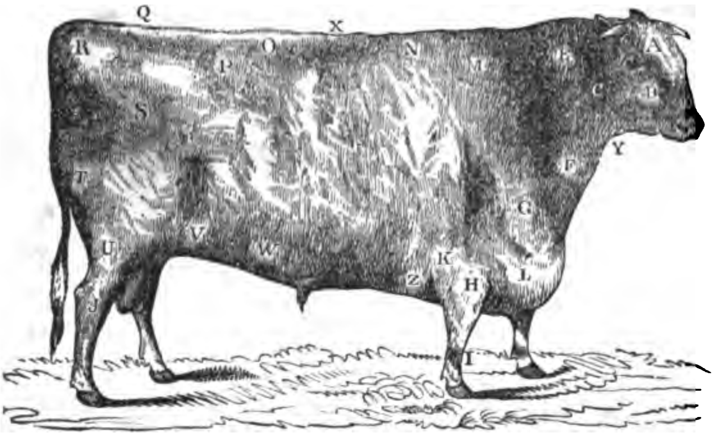
In the first place, lay aside all boyish apprehension of being thought *old-womanish*, and immediately after extreme exposure, remove your damp clothing, and having briskly chafed the skin with coarse flannel, a crash-towel, or a flesh-brush, before a good fire, and put on dry clothes; refresh yourself with a light but substantial supper of soup, meat, and vegetables, or bread crumbed into boiled milk, with the addition of a little cayenne or black pepper, or if you have neither, what answers as well, a red pepper or two, thrown into the milk when boiling—an article, which the smallest patch of ground pertaining to the poorest, should be made to bear. If the exposure has been great and you are much exhausted, then retire, directly after supper, to a well-covered bed, and our word for it, the next morning finds you as well prepared for a good breakfast and active duty as ever. These rules have a reference to summer as well as winter, and if followed by those in our western country, whose duty calls them to new or low lands, the more essential is it to attend to them closely.

From a careful observation of this very subject, we believe it is the want of due regard to some such cautions, and sitting out in the evening air after the day's work is over, that our working men, during the warm season, are so often prostrated with that wretched and discouraging disease, the fever and ague, to which they are peculiarly exposed. In short, it is not great exposure, but great neglect after it, which causes to that large and valuable class of the community, our laboring population, so much disease and sickness. Be persuaded of the truth of this, act upon our suggestions and be temperate, and you may hope for a cheerful and vigorous old age.

THE POINTS OF A DURHAM BULL.

We have the pleasure of herewith presenting to our readers, the portrait of the celebrated prize bull, Cleveland Lad, the property of Thomas Bates, Esq., of England. We have his portrait in size to match the Duke of Northumberland, figured in the May number, which we shall give in our next, together with a brief description of him. For this reduced sketch, and the lettered points of the animal, we are indebted to the pencil of Francis Rotch, Esq., of Butternuts, Otsego county, in this state; quite life-like and finely is it done too. We hope he may favor us hereafter with sketches of some of his own animals, a choice herd of which he has bred with much care and attention. In the mean while, the young breeder would do well to study this cut thoroughly, for the animal figured here excels in all essentials, and it is lettered and explained in such a manner, as to give the reader a correct knowledge of the technical terms of the outside parts which constitute horned cattle.

CLEVELAND LAD.—(FIG. 17.)



EXPLANATION.

A—Forehead.
B—Face.
C—Cheek.
D—Muzzle.
E—Neck.
F—Neck vein.
G—Shoulder point.
H—Arm.
I—Shank.
J—Gambril, or hock.
K—Elbow.
L—Brisket, bosom, or breast
M—Shoulder.
N—Crops.
O—Loin.
P—Hip, hucks, hocks, or huckles.
Q—Crupper bone, or sacrum.
R—Rump, or pin bone.
S—Round bone, thurl or whirl.
T—Buttock.
U—Thigh, or gaskit.
V—Flank.
W—Plates.
X—Back, or chine.
Y—Throat.
Z—Chest.

The Property of Thomas Bates, Esq., Kirkleavington, England.

Tour in England. No. 14.

DAIRY STOCK.—It has been a source of constant experiment and anxious inquiry, for more than a century, by the dairy-men and cow-keepers of England, to ascertain which is the best and most profitable breed of cows for milk, and the result seems to be, when food is plenty, that the Short-horns have won the palm, and have been established in the first rank for a considerable time without rivals, or the possibility that they ever can be beaten. And by Short-horns we mean, not only such as are strictly herd-book animals, but those also, of cognate family; such as exist in the counties of Yorkshire and Durham, and are severally known by these names.

The quantity of milk that these animals have repeatedly given, is so great as to have been considered worthy of record in the parish annals of different localities; but inasmuch as we did not see these records, and are unacquainted with the circumstances of feed, &c., which caused such great productions, we shall not give the particular reports we heard concerning them, merely premising that it has been, in several instances, over 40 quarts per day, wine measure. This quantity will not appear so extraordinary to the reader when he has finished this article, and learns the manner in which the cows here are kept and fed.

Next to the Short-horns, as a dairy beast, the Ayrshires seem to enjoy the greatest reputation. Mr. Rankine, in the Reports of Select Farms, maintains that Mr. Aiton's statements of the milking qualities of the Ayrshire are too high on the average. Mr. R. asserts, however, that he had seen 18 Scotch pints (36 English quarts) drawn from a cow in one day; but this was of very rare occurrence. We saw quite a number of these animals in different parts of the kingdom, but the general statements which we received of their yield in the best three months of the season, was from 16 to 24 quarts, averaging perhaps 20 quarts through the summer. It is possible in their own fine grazing districts of Ayrshire, and on their peculiar food, that the best selected herds may average more than this. Count de Gourcy, in his late Agricultural Tour in Great Britain, states on the authority of Mr. Fandley of Maybol, that his cows during the best part of the season, gave from 38 to 45 quarts of milk per day. We should like to know what kind of quarts Mr. Fandley means, for the statement in English measure seems to us incredible. Unless the cows were *fed* with *milk itself*, we can not believe it possible for any animal of the size of an Ayrshire, to eat food sufficient to produce so enormous a quantity of milk. We have seen one cow only in the United States that gave 41 quarts per day, and she was as large as a good-sized ox, and was stuffed during the time with as much of the most succulent grass as she could eat.

Be these statements, however, as they may, the Ayrshires are undoubtedly a superior race of dairy stock; although, it must be confessed, that they have as yet rather disappointed expectation when removed from their own district. Yet, whatever their good qualities are, they have undoubtedly derived them from the Short-horn cross, and this becomes the more apparent to us, since the cross of Durham bulls upon our own native stock, gives a produce in repeated instances, of the same color and general characteristics as the Ayrshires, which proves them to a certainty a cognate breed.

The third breed in point of dairy properties, is the Jersey cow; or as at present improved, when we take the superior quality of the milk into consideration, many would rank it first, as the extraordinary quantity of 19 pounds of butter has been made from one of this breed in a single week. Youatt, in his work on British cattle, describes the Jerseys under the title of Alderneys, and gives a very meager and unsatisfactory account of them. In consequence of large importations, they abound now throughout the south of England, and, as we were informed, have been greatly improved in Jersey within the present century. This has mainly been done by establishing a scale of points, which forms the criterion in judging of dairy stock; the only measure in our humble judgment, calculated to ensure a steady, scientific improvement in any breed of animals.

SCALE OF POINTS FOR COWS AND HEIFERS.

Art. I. Breed, on male and female sides, reputed for producing rich and yellow butter . . .	4
II. Head small, fine and tapering; eye full and lively; muzzle fine and encircled with white; horns polished and a little crumpled, tipped with black; ears small, of an orange color within .	8
III. Back straight from the withers to the setting on of the tail; chest deep and nearly of a line with the belly	2
IV. Hide thin, moveable, but not too loose, well covered with fine and short hair of good color	2
V. Barrel hooped and deep, well ribbed home, having but little space between the ribs and hips; tail fine, hanging two inches below the hock	5
VI. Fore legs straight and fine; thighs full and long, close together when viewed from behind; hind legs short, and bones rather fine; hoof small; hind legs not to cross in walking . .	2
VII. Udder full, well up behind; teats square and largely placed, being wide apart; milk veins large and swelling	4
VIII. Growth	1
IX. General appearance	2
Perfection for cows	30

Two points shall be deducted for the number required for the perfection of heifers, as their udders and milk-veins can not be fully disclosed.

No prize shall be awarded to cows having less than 21, or to heifers having less than 19 points.

The color of the Jersey cows is a reddish-brown, dun, yellow, or light-red ground, mingled with more or less white; light-red and white we most admired. They are rather above the medium height, and of light carcase; fine, clear, waxy, short, turned-up horns; long, clean head; beautiful, mild, liquid eyes; thin neck; shoulders and limbs as fine as those of a race-horse; sharp back; light quarters; and a soft, thin skin. They suit the mild and equable climate of Jersey, Guernsey, and the south of England, but are too fine and delicate for the extremes of America. Their skin is so thin, that the flies in summer would torment them greatly on the one hand, and the cold of winter pinch them on the other. We have seen a few ordinary animals of this breed imported into the United States.

Of the other breeds of cows in Great Britain, as dairy stock, little can be said, except in favor of the Devons, as improved principally by Mr. Coke, Earl of Leicester. Mr. Bloomfield, one of his tenants, and who probably was the main instrument of the improvement, challenged all England to milk against his herd. There is no doubt but they are superior milkers, although we think the challenge was rather a bold one. Certain it is, however, that they beat the Ayrshires sent into that district, and tried alongside of them. We merely had a verbal report of this, and can not say whether the trial was sufficiently thorough to decide the respective merits of these breeds as dairy stock. The Devons in size, and all good qualities, have been so much improved within the last quarter of the century, as to make any published account of them which at present exists in English books, very imperfect.

We now come to the manner of keeping cows in Great Britain, in the best dairy districts, which is the very antipodes of our system. At home, it often seems to be the study of the dairy farmer, to see what is the greatest number of raw-boned, skinny animals he can support on a given quantity of land; and what is the thinnest and shortest amount of grass that will keep the breath of life in their bodies. Here, it is totally the reverse; and they endeavor by supplying an abundance of succulent and nutritious food, to see what is the greatest quantity of milk that can be obtained from each cow. These are accordingly kept housed in cool stables during the heat of the day, where flies can not torment them, and are fed on fresh cut vetches, grass, or clover, and toward evening are turned into rich pastures to graze till the next morning. In addition to this, they are frequently fed a mess of brewers' grains night and morning, or bean or barley-meal, mixed up with a little cut straw or chaff, to prevent their cloying. This, with strict attention to the breed, is the only secret of the large average production of milk from cows in Great Britain, which so astonishes us at home We do not contend, however, that the English method of feeding should be strictly followed in our own country, except in the vicinity of large towns, where in consequence of the high price of milk, and the readiness of sale, we are sure this would be the best course to pursue; but in every district, however remote, we think that a more equable abundant, and better quality of food should be provided; for on this depends not only the quantity, but the quality of milk, and by a parity of reasoning, that also of the butter and cheese.

THE ROSE.

(Fig. 18.)

We here present to our fair readers the queen of flowers, the rose—the "lady rose," the truest emblem of themselves and charms. It is a flower so well known, and so universally cultivated, that it is quite unnecessary for us to say one word upon the subject. The varieties are almost countless, and perhaps no one country produces a greater number, naturally, than our own; some of which, especially those from the prairies, have been introduced into England and other parts of Europe, and are highly valued there. Every lady should have them in her yard and garden in summer, and in her parlor in the winter. They are delightful to the eye, and fragrant to the smell, and add cheerfulness and beauty to all around them. Then cultivate the rose—the "lady rose" above all other flowers.

ORIGINAL CORRESPONDENCE.

We would call attention to the suggestions of Dr. Cartwright in the excellent article which follows, particularly in the sixth paragraph, where he explains how unhealthy stagnant waters, bogs, and marshes, may be converted into fruitful rice-fields. We are also of opinion with him, that rice may be cultivated to advantage much farther north than has ever been attempted. A fair, wild variety grows abundantly on the shores of Lake Superior; and why may not rice be acclimated from one degree to another north, as far as corn, which is evidently, originally, a tropical production?

For the American Agriculturist.

CULTIVATION OF RICE.

Natchez, March, 25, 1843.

Mr. Allen, Dear Sir: In answer to your inquiries about rice and the comparative product of what is called *upland* and *lowland*, I can not give you much information. What little I have is at your service. Together with many others, you seem to have taken for granted, that there is a variety of rice adapted to upland cultivation, and another to lowland. Certainly, there are many varieties of rice; but I am induced to believe that they are all essentially aquatic. All the varieties, yet discovered, flourish best under the inundation system of culture; yield more to the acre, give less trouble, and require less labor. Nevertheless, each variety grows pretty well on light, moist uplands, without irrigation, when cultivated with the hoe or plow. The product, however, is so much less than that by the irrigation system, and the labor of tillage so much more, that the upland producer never can compete successfully with the lowlander. The former may curtail his expenses by growing rice for domestic uses, but he can not, very profitably, produce it for sale. Besides the ten-fold labor, which rice on uplands requires, in comparison to that cultivated by the irrigation system, it can not be sown thick enough to make a larger yield per acre. Space must be left for the plow or hoe to till the rice, which is not necessary in those localities where it can be overflowed at will, and the water drawn off as occasion may require.

The method pursued on the rice lands of the lower Mississippi, is to sow the rice broadcast, about as thick as you sow wheat at the north, and harrow it in with a light harrow having many teeth; the ground being first well plowed and prepared by ditches and embankments for inundation at will. It is generally sown in March. Immediately after sowing, the water is let on, so as barely to overflow the ground. The water is withdrawn on the second, third, or fourth day, or as soon as the grain begins to swell. The rice very soon after comes up and grows finely. When it has attained about three inches in height, the water is again let on; the top leaves being left a little above the water. Complete immersion would kill the plant. A fortnight previous to harvest, the water is drawn off to give the stalks strength, and to dry the ground for the convenience of the reapers.

A different method is practised in the northern part of Italy. The seed is sown in April; previously to which it is soaked a day or two in water. After sowing, about two inches of water is let in upon the ground. The rice comes up through the water, which is then drawn off to give the plant strength, and after some days, is again let on. The rice is more apt to mildew under this practice, than our method of letting the water on about the time the Italians draw it off. Mr. Jefferson, in his memoranda of a journey into the northern part of Italy in 1787, published in 2d Vol. of his correspondence says, that in the neighborhood of Milan, " they first plow the ground, then level it with a drag-harrow, and let on the water; when the earth has become soft, they smooth it with a shovel under the water, and then sow the rice *in the water*." The same measure of ground yields three times as much rice as wheat. The only labor, after sowing, is to see that the rice is properly irrigated, except in some localities where aquatic plants prove troublesome, the water effectually destroying all others.

The rice-grounds of the lower Mississippi produce about seventy-five dollars worth of rice per acre. The variety called the Creole white rice is considered to be the best. In the eastern part of the State of Mississippi, called the "*piney woods*," rice is very generally cultivated on the uplands. Although it can not be made a profitable article of export, yet it affords the people of that interior region an abundant supply of a healthy and nutritious food for themselves, and a good provender for their cattle, and makes them independent of the foreign market. Unlike other kinds of grain, it can be kept for many years without spoiling, in a warm climate, by simply winnowing it semi-annually, which prevents the weevil and a small black insect that sometimes attacks it. It is cultivated entirely with the plow and harrow, and grows well on the pine barrens. A bull-tongued plow, a kind of shovel-plow drawn by one horse, is driven through the unbroken pine-forest; not a tree being cut or belted, and no grubbing being necessary, as there is little or no undergrowth. The plow makes a shallow furrow about an inch or two deep, the furrows about three feet apart. The rice is dropped into them and covered with a harrow. The middles, or spaces between the furrows, are not broke up until the rice attains several inches in height. One or two plowings suffice in the piney woods for its cultivation—weeds and grass, owing to the nature of the soil, not being troublesome. A similar method of cultivation obtains on the prairie land of the northwestern states.

Rice, like hemp, does not impoverish the soil. On the contrary, it is a good preparatory crop for some others, as Indian corn. The pine barrens of Mississippi would produce rice ad infinitum, if it were not that the land, after a few years, owing to the sandy nature of the soil, becomes too dry for it. It has been ascertained by Arnal, that 12 pounds of wheat-flour and 2 pounds of rice will make 24 pounds of an excellent bread, very white and good; whereas, without the addition of rice, 14 pounds of flour will only make 18 pounds of bread. Like other kinds of grain, rice adapts itself to the soil and climate, and particular mode of cultivation; but if the seed be not changed, or selected from the best specimens of the plant, it will ultimately degenerate. Thus in Piedmont, after a long series of years, the rice became so much affected with a kind of blight called the *brusone*, as to compel the Piedmontese to import fresh seed in 1829, from South Carolina. When Mr. Jefferson visited Piedmont in 1787, the exportation of seed-rice or rice in the husk was punished with death. The American rice introduced into Piedmont escaped the *brusone*, but it was some years before it adapted itself to the soil and climate. Some years ago, a French traveller by the name of Poivre, finding rice growing in great perfection on the mountains and high lands of Asia, particularly Cochin China, named it "*riz sec*" or dry rice, and sent the seed to Europe, where many experiments were made with it. It yielded no better than any other kind of rice, and was found like all others to succeed best when inundated. The reason why it yielded so much more in Asia than in Europe, can be readily accounted for, by the natural inundations it received from the excessive rains during the monsoons.

The discovery of a dry or upland species of rice was for a long time a desideratum to the European agriculturist; because both France and Spain interdicted the cultivation by inundation on account of its supposed insalubrity. But no variety has been discovered which yields as much out of the water as it does in it. There are many localities in the United States, where the culture of rice by the irrigating system, would rather serve to make the surrounding neighborhoods healthy instead of sickly. It is generally admitted, that a given surface of ground completely inundated, is much less unhealthy than the same surface partially inundated, or *in transitu* between the wet and the dry state. Hence, mill-ponds which partially dry up in the summer, are fruitful sources of disease. Some of the best rice is said to grow on the bottom of mill-ponds. Nothing more is necessary, than to make the bottom of the mill-pond perfectly level, and then to overflow the whole surface just deep enough to keep the top leaves above water. As if to show, that unhealthfulness is not necessarily connected with the culture of this valuable grain, nature has imposed a law upon it, ordering that it should flourish better when overflowed with pure running water than with the stagnant waters of impure lakes and marshes. If the mathematician with his leveling instrument were called to the aid of the agriculturist, it would be a very easy matter, in many localities, to mark out the course and required depth of those drains, which would give motion to stagnant waters, and convert many unhealthy and impenetrable bogs and marshes into fruitful rice-fields.

The progress of agriculture is very much impeded by error and confusion in names, which can never be corrected until the Botanist comes to its aid. Thus, on the Rhine I met with a species of spring-wheat, the *triticum monococcum*, cultivated under the name of *riz sec* or dry rice. This kind of wheat is particularly adapted to cold, mountainous regions, with a poor silicious soil, and well deserves the attention of the American people, not as rice, but as wheat. In Alsace it is called "*epeautre de mars*," or rather, "*la petite epeautre*," to distinguish it from the *triticum amyleum*. There are two kinds of rice, which are said to succeed best on uplands; the long and the round. The former has a red chaff, and is very difficult to beat. The latter shakes out, if not cut as soon as ripe. They nevertheless succeed best under the inundation system of culture. In the eastern hemisphere, rice is cultivated as far north as the 46th degree of latitude. The climate of the United States is better suited to it than that of Europe, because our summers are hotter. In the northern parts of China the variety called the imperial rice, or *riz sec de la Chine* (the *oriza sativa mutica*), is more precocious than any other, is said to yield a heavy harvest, and to constitute the principal food for the people of that populous region. But it has succeeded no better in Europe than any other kind of rice.

The best rice-lands of South Carolina are valued at five hundred dollars per acre, while the best cotton-lands sell for a tenth part of that sum, proving that rice is more profitable than cotton. The profits of a crop should not so much be estimated by the yield per acre, as the number of acres a laborer can till. After the land is properly prepared for inundation, by levelling, ditching, and embankments, a single individual can grow almost an indefinite quantity of rice. Rice is no doubt ultimately destined to supersede cotton in a large portion of Mississippi and Louisiana. There is a body of the richest alluvial land in the world, lying in the southern part of this county, Adams, and the adjoining county of Wilkinson, not forty miles from Natchez, containing upward of one hundred thousand acres; many entire sections of it, at this very day, belonging to the United States government, and subject to entry, and the balance, including the improvements, not valued at more than from ten to fifty dollars per acre, which at very little expense could be converted into the most productive rice estates. There is a large lake, called Old River, of some twenty miles in length by a mile in width, forming the boundary between Adams and Wilkinson counties. This lake, by an embankment two hundred yards in length, could be cut off entirely from the Mississippi river, and would serve as a reservoir to receive the water from the rice plantations, while the waters of the Homochitta river could be made, at all times, to overflow the rice-fields. On the coast, near New Orleans, the water of the Mississippi itself is conducted through ditches to overflow the rice-grounds. But as the banks have only a very gentle slope backward, the water has to be conducted a mile or more, unless the river be very full, before it arrives at land sufficiently low to inundate. Farther backward the swamps set in; thus limiting the rice lands to a narrow strip behind the cotton and sugar-lands, and in front of the swamps. But in the region of country just referred to, the Homochitta river coming down from the hills could be made to overflow the Mississippi bottoms up to the levees on the margin of the great river itself. The lake just mentioned would at all times afford an ample reservoir for the effete waters from the rice estates. It is true that a large portion of the Homochitta river falls into the lake, but it is equally true that a dam, not much exceeding a common mill-dam, would turn the Homochitta in another direction, viz., into Buffalo river, about half a mile distant, through a natural canal or bayou. The banks of the Homochitta, from the place designated for the dam, to its present mouth, a distance of fifteen miles, occupy a higher level than the Mississippi bottoms; thus affording every facility for irrigation with very little expense or labor.

Lake Concordia, a similar lake in extent, lying a few miles west of Natchez, has lately had its communications with the Mississippi river closed by artificial embankments, called *levees* in this country. The consequence is, that at the moment I now write, the water in the Mississippi river is some 15 feet higher than the water in Lake Concordia. When the Mississippi overflows its banks, I have never less than ten feet bank at my plantation, the lowest ground on Lake Concordia. The lands on Lake Concordia can not, however, as you might suppose, be converted into rice plantations by conducting the water from the Mississippi river, because it is only when the Mississippi is very full, that they could be inundated at all, and then only partially. But if there were in the vicinity of Lake Concordia an inland stream, like the Homochitta, tumbling from the hills, you can readily perceive how easy it would be to inundate them at pleasure, and drain the water into the lakes. I mention the section of country in Adams and Wilkinson counties, not because it is the only one favorably situated for the culture of that most profitable and useful grain, rice, but merely to answer your inquiries in part, by giving you a glimpse of some of the agricultural resources of this section of country, which can not be understood without some allusion to its topography. However good a handmaid chemistry may be to the farmer or planter, he should not be taught to expect too much from it to the neglect of agricultural topography. It is the science of agricultural topography which lies at the root of those wonderful improvements that have made the Lombardo-Venetian kingdom rival, and even excel, England in agriculture. But I have not time, at present, to answer your inquiries in regard to the system of irrigation so successfully practised in the north of Italy. Very respectfully, your obedient servant,

SAMUEL A. CARTWRIGHT.

For the American Agriculturist.

REMEDIES AGAINST THE TURNEP FLY.

Buffalo, April 25th, 1843.

As the cultivation of the different kinds of turnep is becoming somewhat extensive in the United States, and wherever adapted to soil and economical feeding, it is a valuable crop, a few hints for their protection against enemies may be useful. The principal danger to the turnep plant is immediately after it appears above the surface of the ground. There are a variety of insects that feed upon and destroy it, during the first few weeks of its existence; but its most considerable enemy is a small black bug, that seizes upon the tender cotyledons the moment they make their appearance. Where the enemy is not in sufficient force to consume all the young leaflets as they appear, the plant will make a gradual, though slow progress; and when so far advanced as to be able to put forth its larger and more fibrous leaves, it will generally reach maturity. But it must be remembered, that any diminution of its leaves, especially in its early existence, is prejudicial to its growth. The leaves are to plants, what the lungs are to animals, and in nearly all cases they superadd, in no small degree, the functions of the stomach also; for in addition to throwing off a portion of the surplus moisture, oxygen, &c., taken in by the roots, they absorb carbon largely from the carbonic acid of the atmosphere, which becomes fixed in the vegetable as a large proportion of its matured substance. Of course the early leaves of all plants should be protected with the utmost care.

For the protection of the turnep, I have found no more efficacious means than soaking the seed in the *most offensive tanner's-oil* for 2 or 3 days previous to sowing. This saturates the seed with the repulsive taste and odor, and as the germ which first appears above ground is furnished *exclusively* from the seed, the cotyledons, which are the most exposed to the insect, are charged with a flavor every way adapted to their protection from its ravages. In addition to this great advantage, the oil is one of the most nutritious substances for the support of the young plant, and helps it forward with a rapid growth, by which it sooner gets beyond the reach of danger.

Phosphoric acid in the proportion of 1 of acid to 2 of water, forms a steep or soak which gives wonderful acceleration to the growth of plants; soak in this 20 to 50 hours. Arsenic, in the proportion of 1 to 50 of water, in which the seed should remain 12 hours, produces astonishing effects on the early growth of vegetation. The effect of this poison on the product can not be injurious, though the seed soaked should be carefully kept from all living things, and when taken from the steeping vessel immediately buried beyond reach.

After soaking, it can be prepared for sowing, by mixing with plaster, ashes, or air-slacked lime, so intimately mixed, as to obviate any inconvenience from adhesiveness of the seeds.

If the insect is found to pursue the plants afterward, they may be sprinkled with the stale liquid from a tanner's lime-pit. This is most conveniently done with a common watering-pot. If a tannery is not accessible to the farmer, he may easily prepare any desirable quantity of liquid, equally valuable, by collecting stale urine and the strongest drainings from the dung-heap, in large hogsheads, or what is better, in permanent cisterns, which should have a place in every farm-yard, adding lime in proportion to the quantity of liquid. The addition of putrid flesh, fish, &c., will add to its efficacy. A weak brine, diluted sulphuric, or nitric acids (oil of vitriol and aquafortis), may be sprinkled over the plants with success. Unleached ashes, lime, plaster, and soot, sown broad-cast over the plants after a rain, or while the dew is on, are sometimes effectual remedies. In addition to the value of the above applications for killing the insect, they are all directly beneficial in promoting the growth of the plants to the full value of the cost of the material and labor.

Folding sheep on the ground where turneps are to be sown, is an excellent preparation. New land when it can be had, is admirably adapted for a turnep crop, as it is free from insects, and possesses an abundance of the alkalies, which are every way suited to the rapid growth of the turnep. Burning the rubbish on the land required for this crop is a good precaution, as thereby a portion of the eggs and insects are destroyed. Deep plowing will exterminate all that are placed so far beneath the surface, as to be unable to reach it again. The use of long manure, or sowing on a stubble-field, are objectionable, as they harbor and protect the insects.

Where enemies are numerous, 3 or 4 pounds of seed should be sown in drills, and twice as much more broadcast, which affords more food for the fly, and there may possibly be sufficient left for a crop, after supplying the foragers with all they want; the excess, if any, may be thinned with the cultivator and hoe. But in all cases the soil should be in good condition, and be prepared with some rich, stimulating manure, such as night-soil or other concentrated aliment, by which the plant will be enabled to push itself rapidly beyond the reach of marauders. Alternating turneps with potatoes, sugar-beet, and other crops in no way related to this family of plants (the cruciferæ), is useful, by cutting off the supply of food to its enemies, by which it is starved out or compelled to shift its quarters for subsistence.

The frequent use of the cultivator and hoe is beneficial in disturbing and destroying the insects, besides materially assisting the growth of the plant. All family weeds, colewort, water-cresses, hedge-mustard, and the like, which afford food to the common enemy, should be carefully exterminated; and such other kindred vegetables, as cabbages, cauliflower, mustard, table and horse-radish, &c., should be cultivated remote from the turnep-field, so as to afford no rendezvous for their perpetuation.

R. L. A.

For the American Agriculturist.

BENEFICIAL EFFECTS OF LIME.

Clinton, N. J., March 17th, 1843.

Mr. A. B. Allen, Dear Sir: Mr. De Russy did not exaggerate the beneficial effects of lime upon the soil here; and I can safely say that the product of the soil for a section, embracing at least one third of the county—the northern part—has been more than doubled in the last 12 or 15 years. Fifteen or twenty years ago, our farmers raised little or no wheat; rye bread was used almost exclusively in families, and rye, corn, and oats, our main dependance. Previous to that period, lime had not grown into general use; now, every farmer here limes, and with hardly an exception, every farm has its lime-kiln. At this time many farmers sow no rye at all, and those that do, sow it more for the straw than the grain, the straw being superior to wheat for feed and tying stalks when we cut up our corn.

As to your first inquiry, "the character of the soil," it is extremely diversified, and has but one general characteristic—the substratum being a yellowish clay, and stiff. The country is very uneven and hilly, indented with valleys and streams, tributary to the south branch of the Raritan. Our hills are a gravel, loose, and not unusually stony (granite). In our valleys, the limestone is found, and here the land is pretty even, and the soil to the surface a yellow clay, and tolerably stiff. We have also the gray shell, and a dark reddish soil much intermixed with round flinty stones, and the black loam common to bottom meadows; the last four are all found on my farm of 200 acres. There is very little sandy land, and it takes less permanent benefit from lime than any other kind. On all the abovementioned varieties of soil, lime is highly fertilizing, and it is difficult to say which variety is most benefited, though I think the effect upon the lime of stone lands is least apparent. Wet lands, while they remain so, can not be brought up by lime.

Our system of tillage is a constant rotation of crops. Our fields of winter grain we always put down in clover in the spring; this we mow the following year, and the next spring plant it with corn. If not sowed with winter grain, as soon as the corn is cut (a practice on the increase), it is sowed the next spring with oats or barley, and clover-seed; this the following year is pastured or suffered to grow to be turned under for wheat—open fallows are getting out of date.

The quantity of lime applied at one time varies according to the strength of the soil, from 25 to 50 bushels per acre. The best method of putting it on, is to stack it as it is taken out of the kiln in a large heap, throwing a few pails of water upon the heap occasionally as you are adding to it; in a few days after the lime will be found puffed up light, and in the proper state for spreading; if it is then put on we think it does most good. Some throw it on the top in the fall, to be plowed in next spring or summer; but the best method is to put it on after the last plowing and harrow it in—plowing buries it too deep.

For raising land to a high state of culture, our way here has been to crop pretty freely when the land is in good heart; clovering after every crop of straw, occasionally turning it under green, and often suffering it to fall and rot on the surface; this with a sprinkling of lime every two or three years, until the quantity amounts to about 80 or 100 bushels per acre, has invariably succeeded. I must not forget, however, that our farmers bestow a high value on their barnyard manure, and think it indispensable to a heavy crop of wheat.

Plaster is universally used here upon clover and corn, and the advantage of it is undoubted; whether greater or less, with or without lime, it is out of my power to determine. Ashes made in burning lime, are considered about as fertilizing as lime, bushel for bushel; but the effect of lime is far more permanent. A part of your 4th and 5th questions are yet unanswered.

We sow to the acre of wheat 1 3-4 bushels; rye about 1 1-4 bushels; oats 2 bushels; barley a little more; buckwheat, of which we raise a good deal, 2 pecks to the acre. Of the seeds, clover 1 bushel to 6 acres; timothy, 1 to about 10 acres; flaxseed, 1-2 bushel to the acre, when sowed for seed; 3-4 of a bushel when sowed for fibre.

It would be difficult to say what is the average yield of crops here; we think 30 bushels for wheat a fair yield for our best land, though for an average of years, 18 or 20 would come nearer the mark. Corn from 15 to 70 bushels shelled. Rye, of this grain we have had but one good crop in 7 or 8 years. I have had on this place, however, 300 bushels on 10 acres of land; oats 25 to 40 bushels; buckwheat varies from 10 to 40, being a very uncertain crop; flaxseed from 6 to 12 per acre; and of this almost every farmer sows a little.

I have thus in a general way replied to most of your inquiries. To go into the minutiæ of your questions would require a larger space than this sheet. I shall be happy to communicate verbally any farther information, should you think it worth your time to visit this neighborhood.

Accept my best wishes for the success of your undertaking, and apology for my tardy reply, writing being with me something of a task, and believe me, most respectfully, your obedient servant,

George W. Taylor.

For the American Agriculturist.

CULTIVATION AND MANUFACTURE OF MADDER.—No. 2.

Before giving directions for the manufacture of madder, as practised in Europe, I will inform our farmers of the mode pursued in Kentucky of cultivating it.

They first dig the ground to a good depth, making the mold very light and mellow; they then plant small roots in rows, and when they have thrown up stalks of about a foot in length, they bend them down, and throw over them a layer of mold; these will throw up fresh stalks which undergo the same process. This covering up is continued until the third year, when the bed is opened with a pitchfork, and all the roots large enough for use, are washed and dried under a shed. The smaller roots are planted in fresh beds. The beds must be kept clean from weeds. The stalks when laid down become roots. The roots most valuable for coloring are from the size of a small goose-quill, to that of the little finger. If much larger, the coloring matter will be of little value, and if many such are ground with the smaller roots, the whole mass will be injured.

I shall now proceed to describe the manufacture of madder roots for the market. I transcribe this account from A. Ure, on the Arts, &c., published in England last year.

"The madder, taken from the ground and picked, must be dried in order to be ground and preserved. In warm climates it is dried in the open air; but, elsewhere, stoves must be employed.

"The stringy filaments and epidermis are to be removed, called mull; as also the pith, so as to leave nothing but the ligneous fibres.

"The preparation of madders is carried on in the department of the Rhone, in the following manner:—

"The roots are dried in a stove heated by means of a furnace, from which the air is allowed to issue only at intervals, at the moment when it is judged to be saturated with moisture. The furnace flue occupies a great portion of the floor; above are three close gratings, on which the roots are distributed in layers of about eight inches. At the end of twenty-four hours, those which are on the first grated floor directly above the stove are dry, when they are taken away and replaced by those of the superior floors. This operation is repeated whenever the roots over the stove are dry. The dry roots are thrashed with a flail, passed through fanners similar to those employed for wheat, and then shaken upon a very coarse sieve. What passes through is farther winnowed and sifted through a finer sieve than the first. These operations are repeated five times, proceeding successively to sieves still finer and finer, and setting aside every time what remains on the sieve. What passes through the fifth sieve is rejected as sand and dust. After these operations, the whole fibrous matters remaining on the sieve are cleaned with common fanners, and women separate all the foreign matters which had not been removed before. For dividing the roots, afterward, into different qualities, a brass sieve is made use of, whose meshes are from 1-4 to 1-8 inches diameter. What passes through the finest is rejected; and what passes through the coarsest is regarded of the best quality. These roots thus separated, are carried into a stove, of a construction somewhat different from the first. They are spread out in layers of about four inches in thickness, on large lattice-work frames, and the drying is known to be complete, when on taking up a handful and squeezing it, the roots break easily. On quitting the stove, the madder is carried, still hot, into a machine, where it is minced small, and a sieve separates the portion of the bark reduced to powder. This operation is repeated three or four times, and then the bolter is had recourse to. What passes through the sieve, or the brass meshes of the bolter, is regarded as common madder; and what issues at the extremity of the bolter is called the flour. Lastly, the madder which passes through the bolter is ground in a mill with vertical stones, and then passed through sieves of different sizes. What remains above is always better than what goes through."

The manufacture of madder roots appears to be a very formidable operation, yet when reduced to practice, I suspect most of the difficulties so apparent in description, would vanish.

Wm. Partridge.

For the American Agriculturist.

THE RHODODENDRON A GOOD THERMOMETER.

There are few shrubs in our country that have not some use, though discoverable only by the closest examination, and few persons would see, on first scrutiny, in the Rhododendron Maximum a complete thermometer. There have been for the last five years several very large specimens of this shrub, close by our dining-room windows, and by protracted observations by various members of the family, they have been so infallible in showing the temperature of the atmosphere, that the thermometer which hung without the door, became in some measure useless, unless we wished to ascertain to a degree, the state of the air.

When the weather is cold, and the thermometer about zero, the leaves are rolled so tightly together that it seems almost impossible for them to again become unrolled, at the same time they are turned nearly black; and the expansion, as the weather moderates, is so gradual, that by the degrees of their color and shape, a person is enabled to form a pretty accurate opinion of the weather; and when mild, the leaves assume a light and very rich green.

I should think this plant might become valuable on this account to farmers and others, whose remoteness from cities and towns where thermometers may be had, prevent them from procuring them; and I believe that a winter's attention to the rhododendron will enable any one to judge of the external temperature of the atmosphere, with very considerable accuracy. At the same time, it is one of our most ornamental native shrubs, and no one can fail to admire a plant covered with its profuse mantle of roseate flowers, besprinkled through its beautiful, shining foliage; these alone impart a richness to American forests sought elsewhere in vain.

George W. Fahnestock.

Pittsburg, Pa., April, 1843.

It is with great regret that we learn from the Messrs. Brentnall, that they retire from the business of breeding Berkshires. Being the first to commence, we had supposed that they would be the last to give it up; but the fact is, with the superior mild climate of the south, they can make pork there for half the price that we can here at the north; besides, for a succession of years we have been supplying them with our choicest breeds of swine, and have at length put it into their power to beat us at our own game, and breed as good animals as ourselves. We cheerfully coincide with all that the Messrs. Brentnall say of Colonel Bonner. He is one of the most spirited and judicious breeders at the south; and while upon this subject, we will now add, that Mr. R. H. Hendrickson, of Middletown, Ohio, recently sent him a young Berkshire boar, by Windsor Castle, selected in England and imported by ourselves in 1841. Col. B. has given him the name of Great Western, and we have no doubt when full grown that he will well deserve the title, and prove a tall and somewhat stout customer among the Georgians.

At the commencement of our breeding Berkshires, we were among those who purchased stock of the Messrs. Brentnall; and we have also seen it from their piggery scattered over this state, Ohio, and Kentucky, and although we since became rival breeders, we trust that we can say in this instance, as well as in every other, that it was always with the most generous and liberal views and expressions on our part. Whenever we met a good thing we said so, and that freely, no matter who bred and owned it, and we have the satisfaction of believing that our motives and feelings have generally been reciprocated. We tender to the Messrs. Brentnall our warm thanks for their kind expressions, and we can assure them, that whatever enterprises they may hereafter be engaged in, they have our best wishes of success.

For the American Agriculturist.

LAST SALE OF BERKSHIRES.

Canterbury, Orange County, N. Y.,
April 17th, 1843.

A. B. Allen, Esq.: In the first place allow us to tender you our thanks, for the insertion in the January number of your invaluable periodical, the first premiums awarded to the Berkshires at the Planters' Club held at Sparta, Georgia, which we presume you took from the Georgia Journal which we had previously forwarded to your office. Up to that time, we had sold to Colonel John Bonner of White Plains, Green County, Georgia, seven sows and a boar, which all met with his decided approbation. We have now just sold him our whole reserved lot of Berkshires, together with our good will as breeders of the same. They consist of six sows and two boars, including the imported animals, Ontario and Lady Huttleson; the only two remaining of the last importation, sent us out by our friend Mr. Hawes. They are all fine and very superior animals, and we flatter ourselves would not suffer in comparison with any of their kind in the country.

The produce from Ontario have uniformly been vastly superior to any other pigs we ever bred, which has given him a good notoriety with the numerous customers we have supplied; he will consequently take with him a well-established reputation to his enterprising owner, and also be a great acquisition to the breeders of Berkshires in the state in which he is placed.

In transferring our breeding stock to, and retiring in favor of Colonel Bonner, we have every confidence in his judgment and abilities as a breeder, to keep up and even increase the high qualities of the animals under his supervision; and from these conclusions, we take great pleasure in most respectfully recommending his stock of Berkshire hogs to the notice of the public, and particularly to those persons who anticipated honoring us with their orders for the ensuing season. From the number and superiority of the animals sold Colonel Bonner, together with his choice selections from other celebrated piggeries, we may safely and confidentially assert, that he has in his possession some of the best blood, and very probably the most choice selection of Berkshire hogs to be found in one man's possession in the Union. In recommending Colonel Bonner's fine stock to the particular attention of breeders of Berkshires, we can in all confidence assure those persons intrusting their orders to him, that they will be fully, promptly, and honorably met; and we may farther add, that in zeal and public spirit, Colonel Bonner yields the palm to no man.

We have been in the possession of the improved race of Berkshires ever since the year 1824, consequently, we believe we were the first to mount the Berkshire hobby. Whether we have ridden for good or evil to the country, we will leave it to the community to decide; but now we dismount, and with our bow and kind thanks to our numerous patrons, and our best wishes, joined by our humble endeavors for your success in the new and laudable pursuit you are engaged in, we retire from the business of breeding Berkshire pigs for sale altogether. With great regard and esteem,

A. & G. Brentnall.

For the American Agriculturist.

CULTURE OF SILK.

Extract of a letter from a gentleman in Massachusetts, to his correspondent in Monroe County, N. Y., who has always been faithless in the silk cause:—

After all, the poor despised mulberry may be worth something, for feeding worms, making the best of paper, and the stalks used to obtain bark silk and no mistake; so say those who have tried it. I suppose you are yet among the doubting. Astonishing as it may appear to you, some have the courage to suggest, that a field of mulberries may be cultivated at a profit exclusively for the purpose of making paper; and also, that after being stripped of the foliage, the tender stalks may be subjected to the jaws of the common brake, and procure abundance of valuable bark silk, which would make excellent Pongee, very suitable for coats, vests, handkerchiefs, pantaloons, &c.

It remains, however, to be proved, that the bark silk, from an acre of close planted mulberry, may be worth an acre of flax; and why not much more, as silk is more valuable than flax? A silk-grower in this vicinity has a pair of pantaloons made of silk spun from perforated cocoons, which he has worn two seasons, and it is apparently as durable as leather. It is thought that the bark silk may be made valuable for similar purposes. To do all this, and use up the whole mulberry plantation, requires some skill, all which is accessible. Here are three separate applications of the mulberry patch, the product of which may be worth more than can be obtained in any other crop.

A great improvement is being put in order for feeding worms. It is less expensive than the usual cocooneries, and more congenial to the wants and habits of the worm, called *open feeding*. Their treatment has been too nearly allied to the nursery system; whereas, they are the natives of the open air, and should be accustomed to all the vicissitudes of the weather. The worms would be more healthy and form better cocoons. Cocoons have been seen in their forest state in South Carolina, by a gentleman now resident in Northampton. Cocoons have also been seen in the month of July, formed on the white mulberry found in a deep ravine on the southeast side of Mount Holyoke, and near the summit. On opening the cocoons, the live chrysalis was found.

This subject, however, comes not within your medical department, but the avails, in some shape, may replenish the medicine-chest; and I hope you may live to see the time when the culture of silk may become a valuable source of revenue and saving to the country. Why should the United States expend annually some twenty millions of dollars for an article of luxury, which can as well and as cheaply be produced at home, and no longer send our money abroad to encourage the industry and enterprise of foreigners? We have the appropriate soil, climate, and cheap labor among our females, children, the aged and infirm. Why then hesitate what to do? Try the experiment.

Yours, &c., D. C.

Northampton, April 10, 1842.

A correspondent from Alabama asks: "Can you not draw out from some one of your contributors something on plows, harrows, and cultivators? I mean the principle of construction, for there are very few persons who know anything about it. I asked a planter the other day if he made his own plows."

"'Yes.'

"'By what rule do you stock them?'

"'No rule—I just put them together by my *eye*.'

"This was enough to convince me that he cared but little for a mule's shoulders, and his comfort in pulling."

An excellent article will be found on the subject of southern plows, by Mr. Cornell, page 49 of May No. of this paper.

In order to see how it looks, we have taken the liberty of inserting the pedigree of Col. Sherwood's bull, according to the method suggested by us page 73, Vol. I., of American Agriculturist, which we think much more simple than the one adopted in the English Herd Book. It is perfectly preposterous to repeat the G's so often; they *convey no idea* till counted, and it always gives us a sick headache to do this. Beside, the old method can not be followed much longer. Let any one think of a herd-book a century, or even half a century hence with the pedigrees recorded in the usual way, and he will find that the G's will occupy three fourths of the book, and the volumes by that time make a small cart-load. A reform must be made, and the sooner we hit upon a more simple method of record the better. This is our suggestion, and if any one can propose something more appropriate, we shall be glad to hear from him. We took the same liberty in our May No., when we inserted the pedigree of Mr. Bates' bull, Duke of Northumberland, of England, and we trust that Col. Sherwood will pardon us for doing the same with Archer. For some account of a visit made to this stock see Vol. I. page 303 of this paper.

As to a monthly republication, selected from foreign agricultural periodicals, we should be glad to undertake it if we could have sufficient encouragement to do so; but it would not pay at present; the times are too hard, and the public too indifferent to solid agricultural reading-matter.

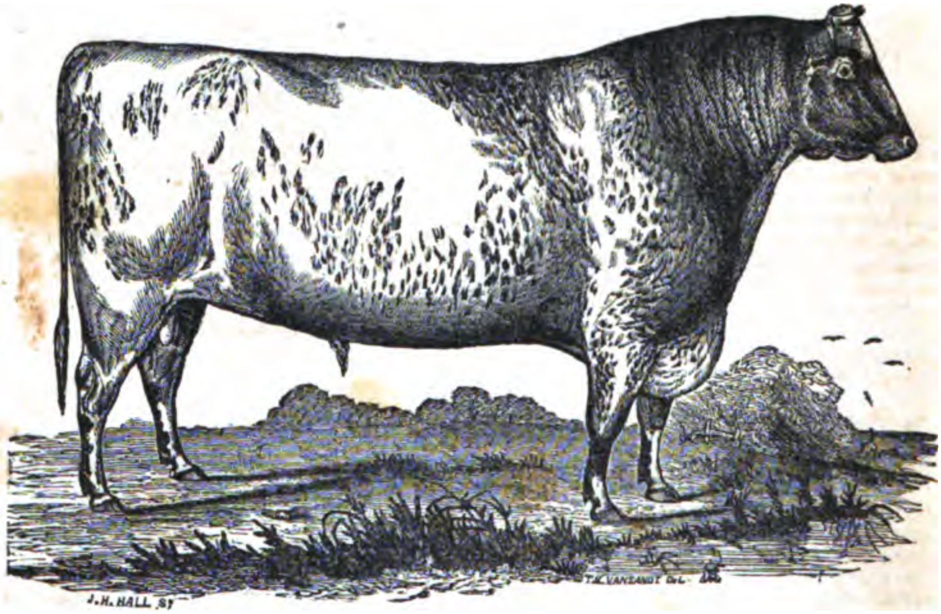
For the American Agriculturist.

WINTERING DURHAM CATTLE.

Auburn, April 27th, 1843.

A. B. Allen, Esq., Sir: I herewith send you a cut of my bull Archer and his pedigree, for insertion in your paper.

Durham Bull, Archer.—(Fig. 19.)



The property of Col. J. M. Sherwood, of Auburn, N. Y.

Pedigree.—Archer got by Rolla, dam Adeliza, by Frederick (1060); d. 2, Adelia, by Orpheus (473); d. 3, Alfrida, by Alfred (23); d. 4, Strawberry, by Windsor (698); d. 5, Old Daisy, by Favorite (252); d. 6, ——— by Punch (531); d. 7, ——— by Hubback (319).

Rolla, got by Patriot (2,412), dam Romp, by Admiral (1608); d. 2, Moss Rose, by Young Denton (963); d. 3, Rosa, by Young Denton (963); d. 4, Ruby, by Denton (198); d. 5, Old Red Rose, by Trunnell (659).

Archer proves himself a fine sire. Since you were with me, Stella and Lily have both calved with heifers, and they are superior to anything I ever saw. Lily's calf by May Duke you know was an improvement upon Lily, but her new heifer calf Lois goes far beyond her. Stella's calf is the best she ever had.

When you were with me, I was feeding straw and corn-stalks. I continued that feed until 1st February, when having fed all my straw and stalks, I commenced on hay; but I would have been perfectly satisfied to have continued to feed straw and stalks until this time, as my cattle were in good condition when these were out. I am confident that this feed would have kept them in the same condition all winter. Two heifers you remember were in the yard, and they have continued there up to this time. Since I have done feeding straw and stalks, they have not had anything to eat, except such litter as has been thrown out of my stable from under the cattle. I found after a while this was keeping them better than I wished, and I then directed that they should not have any more litter placed where they could get at it, and now they live on the twigs of my apple-tree trimmings. My native cows I have fed better than my Durhams, but they are not in as good condition. I have kept Durhams two winters, side by side with the native cattle, and I am confident that I can keep three Durhams to two natives of the same size.

By the way, I had almost forgot to say, that I have two heifers got by Archer on a native cow, with a sprinkle of Devon and Durham in her, which much resemble Ayrshires. From this I am convinced, that with proper selections of a Durham bull and native cows, we can produce a breed equal to the Ayrshires.

Could not a monthly publication be sustained that should be made up from the foreign periodicals? There are many things in these publications that would be valuable to us in this country, and much is of no use now. If a proper selection could be made, I for one should like it. I am, very respectfully, &c.,

J. M. Sherwood.

For the American Agriculturist.

CULTIVATION OF COTTON.—No. 2.

Log Hall, Miss., April, 1843.

I generally finish gathering my crop about Christmas in each year; the past season later by some 15 days, attributable more to plowing and sowing grain, than to the crop, although I sent off 8 bales to the hand; and made corn, provender, &c. in a large abundance. This plan I shall continue to pursue, as the pasturing down the grain is a saving of dry food; as much work also can be done as in the spring, when other operations demand every effective laborer, as well as making a better crop of grain, and having that much work done. I will therefore take you to the first day of January, when I may say the crop is commenced.

Cotton Plant.—(Fig. 20.)

In the first place, I repair all fencing, after which the men are employed in cutting up and rolling logs; the women and children in knocking down cotton stalks when not too large with a stick, cutting up corn-stalks, firing log heaps, burning chunks and the brush that may have fallen from trees, cleaning up hollows, &c. At the same time, I keep as many plows running as is convenient when the earth is in proper condition. By keeping busy at this season of the year, it gives me such a control of the crop, that I can have time to do what is done effectually, which is one half the battle. If the season be favorable, I commence plowing for the cotton crop about the last week in February or the first in March, having flushed all stubble land as early as possible.

If the land was in corn or cotton the previous year, I run off the rows in the old water furrow with a short plow, this year using two horses to it, and running deep. With a turning plow I then throw to this two furrows, one from each side, intending to reverse the last beds. I use the Peacock and Dudley plows, the first a cast mould-board and wrought share, the other, both wrought in one piece.

I leave the ground in this condition until a day or two before I wish to plant, and then break out the entire surface between the rows, the baulk; my reason for so doing is, that the cotton plant grows off faster on a bed of some firmness, the radicle or future root will die oftener on a light surface than when on hard earth, if not so hard it can not penetrate; and by breaking out the middle late, it leaves the bed fresh, except a narrow strip on the top, which is cleaned off by planting, which gives the plant an even start with grass and weeds.

I begin to plant the first fine weather after the 20th of March, though usually not before early in April, some of my neighbors even earlier than the 20th some seasons; I prefer to be a few days later and have all business well up, than to haste in planting, and probably get a bad stand from cold, and part of the plowing to be jumped over.

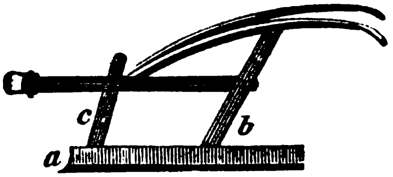
I direct the cotton-seed to be hauled out, and dropped in two or three heap-rows across the rows, at convenient distances, and in sufficient parcels; practice gives the hands a pretty correct idea how much is required. I usually measure enough for the first row, or an acre, seldom planting over 2 bushels myself, and often not over one, especially if bought seed. If the first furrows have been settled by heavy rains, are rough, or have many cotton-stalks on the row, an iron tooth harrow should be run over them, drawn by one horse, and with the row; this cleans off the row, and leaves it in fine condition for planting.

I strike out the furrow for planting with an opener. For the better understanding of the reader I will describe this.

Take a piece of timber 3 feet long, 3 inches square; round the lower side; fasten by a mortice and tennon to the bottom of chip *b* of shovel-plow, about midway of this piece;

near the front end, let in a piece 2 1-2 by 1 inch (*c*) long enough to pass through the beam, and have holes in it and one in the beam, so as to raise or drop the lower piece; the front end of the lower piece (*a*) has a shovel of some size, but to project below about half an inch.

(FIG. 21.)

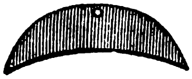


COTTON-FURROW OPENER.

I am very particular to open the furrows as straight as possible; if on level land, or a regular curve; if on hilly, or rolling land. The sower now follows with seed in an apron, and scatters them along in the narrow furrow by shaking the hand, so as to cause each seed to fall separate if possible. This furrow being from 1-2 to 3-4 of an inch deep, can not be covered deep, which would be an injury, seed coming up with more certainty if lightly covered. The nature of the seed requiring the leaves, which are folded or rolled up with the radicle or root in the centre, to rise up before the plume or future stalk can start. The bean will serve to explain somewhat, as it is more generally known, the radicle or root of it plunges down into the earth, while the two cotyledons or the halves of the bean, rise with the plume or future stem between them, though the plume of the bean does sometimes rise when the cotyledons do not, nor can they, from being too deep, or the earth too hard, which never takes place with the cotton-plant.

The *coverer* I use, is therefore made to suit the object in view, as follows: Take a piece of oak timber 18 inches long, 6 wide, and 2 to 2 1-2 inches thick; one edge to be slightly concave, the other rounded off, so as to present this appearance.

(FIG. 22.)



COTTON SEED COVER.

I then get the centre from end to end, and from it slope gradually to each end, leaving the ends half an inch thick or less; this is the front of it.

I fasten it with a bolt to the chip of a shovel-plow, cutting out of the back of it enough to permit the bolt to be fastened by a nut, as also to make it lighter. The object of rounding the top is, to lessen the weight, as also the quantity of earth it would carry. It is made with two sloping surfaces in front, so as to sweep off more earth; and is hollowed out on the lower edge so as to leave the bed slightly rounded to carry off the water.

I prefer planting about one half the cotton crop about ten days before the remainder, that too much necessary work will not be required at the same time; if a rainy spell of weather now, or any other backset should cause detention in working over the first time, grass and weeds will have taken such hold, that the farmer will find as hard work as in fighting fire; but if only the one half be planted first, the last half will not be pressing. I plant upland at 4 feet apart between the rows; 2d low ground at 5 feet distance. Any farmer will find there is very much to be gained by putting his land in fine order before he plants; even if a few days later planting than his careless neighbor, he will soon overtake him in cleaning his crop, besides his crop is not checked in growth; and he would do well to so pitch his crop, that his corn could get one working, before his cotton would require it.

Before giving you the cultivation of the plant, I will describe the seed that I have found to be the best, not only in producing, but in gathering the largest weights per hand. The seed is covered with a short, perfectly white furze, called Mexican, when fresh it is small, but after being cultivated in the United States it becomes longer, gradually losing the white fibres, or changing to a germe. The Pettit gulf seed is the same, only it is carefully selected and kept pure, by the planters in the vicinity of the gulf hills near Rodney—this part of the Mississippi river being called Pettit gulf. This cotton not only produces more, but the bowls (that contain the cotton and seed) open out wider, and it is therefore easier gathered and picked.

Many persons, in circling their hilly land, do it a greater injury than in plowing up and down the hills, because their furrows being inclined, the water has only a longer distance to flow, thus accumulating in quantity, velocity, and force; whereas, if they were correctly run off, the water should lie in the furrow as on level land. In doing this, the curve should be as regular as the nature of the land will permit, for the purpose of admitting the plows to be run close up to the plant, which could not be, if in a zigzag course.

If the cotton-seed be moistened and rolled with ashes and earth, so that the lint or furze be compressed, the moisture of the earth being thus brought directly in contact with the hull or seed, it will vegetate earlier, and will require less seed per acre.

I throw up my cotton bed as flat as I can to break out deep, and leave the water furrow well open, thus permitting the superfluous water to steep from the bed, and the earth to become warmer, this being necessary to the quick growth of the plant. I have now given you a minute detail of the planting, not more so than is necessary to the tyro; my next will be working the plant.

M. W. PHILIPS.

We have never known, personally, a free martin to breed, but have heard in an indirect way of their doing so in two instances. If any of our correspondents have more knowledge than ourselves upon this subject, the facts would be interesting, and we should feel obliged for an account of the same.

For the American Agriculturist.

FREE MARTINS.

Mr. Allen: I have often heard it stated as a fact, that in cases of twins, the one a heifer and the other a bull, the heifer is always *barren.* Will you be good enough to tell us, in a short way, what you know about the matter? It surely is a curious thing, should it be so universally; that it is so in very many, if not most cases, I have not a doubt. I have inquired among my neighbors, and find some believe, and some doubt the story; but in no instance have I met with a case where the *twin heifer of a bull has failed to be barren.*

John Titsworth.

Sussex Co., N. J., April 24th, 1843.

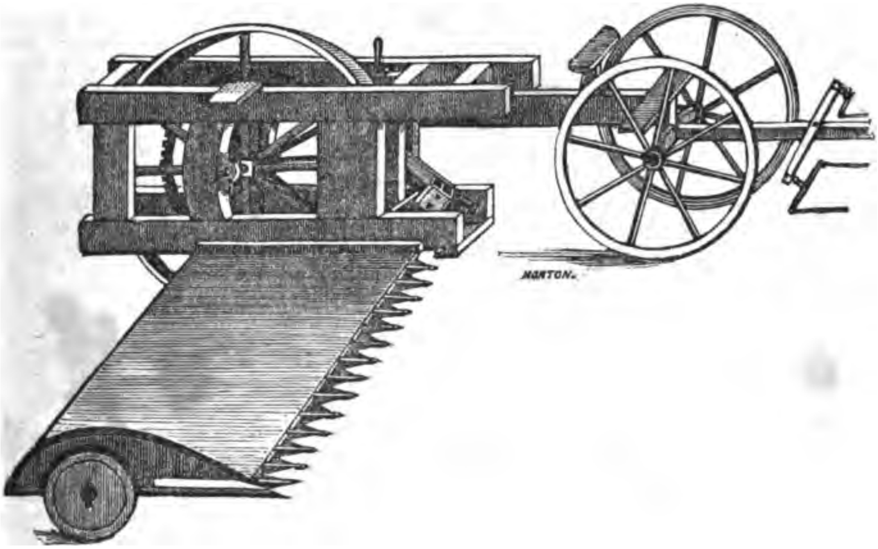
For the American Agriculturist.

HUSSEY'S REAPING-MACHINE.

Agreeably to an intimation expressed in your March number, I send you a description with a cut of my reaping-machine, and presume that this will be sufficient to give the reader an idea of its construction and operation.

When it is in operation in the field, the horses travel on the stubble, and near the standing grain, drawing the machine behind them. That part which cuts the grain is a wide platform, and extends six feet to the right hand into the grain, and is capable of being adjusted as high or as low as grain is usually cut; say from five to fifteen inches from the ground. Along the forward edge of the platform where the grain is cut, is a row of strong iron spikes about the size of small harrow-teeth. These spikes are formed of two pieces of iron, one above and one below, leaving a horizontal slit in each spike for the cutting-blades to play in. These blades are formed like lancet-points, being sharp on both edges, and several inches long. They are fastened side by side on an iron rod, as many blades as there are spikes on the platform; the iron rod with the blades upon it extends through all the spikes, and is connected to a crank immediately behind the horses. This crank is turned by cog-wheels, connected with the main axle, and is moved fast or slow according to the speed of the horses, giving a horizontal, vibratory motion to the blades, causing them to move out of one spike into another, backward and forward, there being as many blades as spikes. As the machine is drawn ahead in the grain, the stalks or straw is received between the spikes, while the vibrating blades cut it off as it enters; the straw being held by the spike both above and below the edge of the blade, while the blade passes into the spike—thus the cutting is made sure.

Reaping-Machine.—(Fig. 23.)



Invented by Obed Hussey, Baltimore, Md.

As the grain is cut, it falls back on to the platform. When the wheat is tangled, this falling back is aided by an instrument in the hands of a man who rides on the machine, whose business is to push off the grain in heaps as it accumulates on the platform. He is able to do this with great accuracy and neatness, leaving the heaps distinct from each other, and in fine order for the binders.

One machine will cut twenty acres per day with ease, if ordinary diligence is used. The blades need no sharpening from beginning to end of harvest. Standing and tangled grain is cut perfectly clean; indeed, lodged wheat is cut better with the machine, than it is usually cut by the cradle, and if the lodged wheat be very heavy, it will be cut very clean, and nearly as fast as if standing. Ample proof of these facts can be had from at least five hundred of the first farmers in the United States.

The price of a machine with shafts for a single horse behind, is $150. The forward wheels as represented in the engraving, will be an extra charge of twenty dollars.

OBED HUSSEY.

Baltimore, April 11th, 1843.

We publish with pleasure the following communication on agricultural schools. We have had within the past three months, repeated inquiries from parents in this city, wishing to know if there were any institution where their sons could be placed to acquire a practical and theoretical knowledge of agriculture. They desired to have their children so near that they could easily visit them, as they would take great interest in their progress, as also in the agricultural operations of the institution. We are perfectly confident, that any person willing and competent to manage a school of this kind, if he would establish it near this city, would immediately obtain as many pupils as he might wish. The neighborhood of New York possesses superior advantages for a school of this kind, and we would earnestly recommend the subject to the consideration of our citizens. Mr. Bement has recently joined the New York Central Farmer. We welcome him to the editorial corps, satisfied that his ability as a writer, and practical experience as a farmer, will make him a valuable co-laborer in the great cause.

For the American Agriculturist.

AGRICULTURAL INSTITUTIONS.

I have long been impressed with the necessity and importance of an agricultural institution for the education of young men in the theory and practice of farming. Every revolving year only tends to strengthen my conviction. From the numerous applications made annually, not only by parents who wish to place their sons under the care and guidance of good farmers, but by young men themselves, who look to commerce, manufactures, and the learned professions with a sorry prospect, and have finally come to the conclusion, that after all, farming is as *honorable*, *respectable*, and possibly in the main, as *profitable* as any other profession, and they are very anxious to place themselves in a situation to obtain the desired information.

I have long admired the model farm of the celebrated Fellenburg of Hofwyl, in Switzerland, and think one such establishment in this state would be of immense importance, ay, of much more importance than some of our colleges. An American, travelling in Europe a few years since, paid a visit to this establishment, was highly delighted, and much surprised to find a student there from the city of New York, who informed him there were several other boys in the school from the same place. "There were pupils on the ground," he adds, "from Germany, France, Spain, Portugal, North and South America, and Tiflis." It has furnished to continental Europe the best modes of its agriculture, while it has sent forth into the above-named countries, some of the most useful, virtuous, and enlightened citizens.

"When," said the lamented Buel, "shall we become wise, and imitate the good, as we are ever ready to do the bad examples of our European ancestry? Where shall we establish schools of scientific and practical agriculture for our sons? Whenever their importance shall be duly appreciated, and our citizens consult their true interests in endeavoring to promote the best interests of their country."

It is difficult to estimate the advantages that might justly be expected from such an institution, in which theory and practice would go hand in hand; where the mental, as well as physical powers were justly cultivated.

An improvement is the great object in every science; the ingenuity of man is constantly at work in order to find out by experiment some new invention better calculated to produce the desired effect; in this way the great and important improvements in mechanics have been accomplished.

Agriculture may be practised without any knowledge of its theory, that is, established practices may be imitated; but in this case it must ever remain stationary. The great proportion of our farmers jog along as if there were no improvement necessary; adhering to the old practices and beaten path of their fathers, grandfathers, and great-grandfathers, before them.

The mere routine practitioner can not advance beyond the limits of his own particular experience, and can neither derive instruction from such accidents as are favorable to his object, nor guard against the recurrence of such as are unfavorable. He can have no resource for unseen events but ordinary expedients, while the man of science resorts to general principles, refers events to their true causes, and adapts his measures to meet every emergency.

Within the last twenty-five or thirty years, there has been a decided improvement in the cultivation of the soil, still there is much yet to learn. The object of the art of agriculture is, to increase the quantity, and improve the quality of such vegetable and animal productions of the earth, as are used by civilized man; and the object of the agriculturist is to do this with the least expense, or, in other words, with profit.

I feel convinced that the establishment of a farm for the purpose of educating young men, and imparting that knowledge, which is necessary, in order to farm on scientific principles, and to good purpose, would confer a great boon to the country, and materially promote our agricultural prosperity. I would consider it to be the first and main object of such an establishment, to make the pupil thoroughly acquainted with, and understand the principles of the science in which he is about to engage; I call it a science, for, to be a *good farmer* requires more scientific knowledge than is generally admitted. Some imagine that farming is so simple a matter, that the *veriest dolt* might be a good farmer; this is erroneous. To be sure, they could give orders to plow, and sow, and reap, and follow other people's examples in the general government; but to be a *good* and *successful* farmer something more is needed.

I have been induced to make the foregoing observations in consequence of having several applications to take young men, and instruct them in farming. I have refused to take them, 1st, on account of my inability to teach them, and 2d, on account of the difficulty which generally arises from jealousy of the common laborers on the farm. They are very apt to imagine more favors are shown, and they receive better fare, &c. Besides, it is no object for a farmer to take one young man for merely the labor he would perform; for it can not be expected that he could take hold at once, and earn even his board. They must be brought on by degrees. I am well convinced that if some competent farmer would undertake the management and instruction (in practice as well as in theory) of a certain number of young men at a reasonable charge per annum, he would make it profitable to himself, and advantageous to his pupils.

In the absence of such an establishment in this state, I most cheerfully recommend the "Eden-Hill Farm Institute," on the river Delaware, 12 miles above Philadelphia. Mr. James Pedder, the able editor of the "Farmer's Cabinet," who is well qualified, has connected himself with J. Coperthwaite, Esq., the owner of the farm, which, "in every respect is well adapted to the purpose, has established an institution for the reception and instruction of young men, in the principles and practice of agriculture and horticulture. He will occupy the elegant mansion, which for healthfulness and beauty of situation can not be surpassed; and it will be the study of himself and family to tender to their young friends the convenience and comfort of a HOME.

"The exercises of the institution will embrace the practice of agriculture in all its various branches and details; the cultivation of the best crops, and the rearing of the choicest stock; the best animals having been selected, and the most improved implements obtained. The management of the plow will form a leading feature in the course of instruction; subsoiling will be adopted on a regular scale, as well as a system of draining, the formation and application of composts, &c., &c. Horticulture will occupy a large space of attention, the students having the advantage of studying and practising this branch, the care of which will be under a professed gardener, having the charge of a range of houses, with an enclosed garden of more than two acres in extent."

I will also take this opportunity to inform the readers of this journal, that an "Agricultural School" has been lately opened in Tennessee, at "Elm Crag," by T. Fanning, the able and talented editor of the "Agriculturist." The school was opened on the 2d of January last, with six students, and I am now advised that there are eleven young gentlemen in the establishment, and preparations are making to take a few more this spring. In addition to the different operations incident to husbandry, gardening, &c., their studies will embrace spelling, reading, writing, arithmetic, English grammar, geography, algebra, geometry, and other mathematical studies, and everything necessary to an English classical education, together with some of the most important sciences, such as botany, geology, chemistry, cultivation, &c. Sacred history and music are also studied.

C. N. BEMENT.

Three Hills Farm, April, 1843.

Accompanying Dr. Philips's last article on cotton, he says in a private letter:—

"I have gathered here 2,500 pounds of cotton on strong cane-land, and from a single acre 1,700 pounds, the year it was cleared. But is 5,989 pounds of cotton a greater product than 100 to 190 bushels of corn? All appear incredible to one who has no experience. Many say the product of cotton can not be increased. Why not? Can we not increase the product of all grain, roots, &c.? of beef, pork, mutton, and wool? I have gathered myself, from a single stalk 50 to 60, and even 100 open bowls, or the cotton from them, to speak strictly. Now suppose a crop could average this. My rows were 5 feet apart; admit the stalks were 3 feet, there being 2,904 stalks, we would have 2,500 pounds or about, or even more; as much of the weight depends on size of bowls. I heard a gentleman of my acquaintance say, he had counted of bowls and forms about 500 *I think.* Suppose the stalk could be nourished to bear these to maturity, we should then have at even 5 feet apart each way, 1,742 stalks, and full 8,000 pounds of cotton. There is one fact as mentioned by a friend of mine on the Mississippi river, General Hugh W. Dunlap, that he gathered (I think) 7 *pounds from one stalk!* Could any mode of cultivation bring a field to this return, we could afford to plant cotton 7 feet 6, by 4 feet, which gives 1,452 stalks on hills, and a product of 10,000 pounds. But this will not be done soon; though I have said for months before Dr. Cloud's article came out, that as the science of farming spreads, it will give, to even us cotton-planters, results as astonishing as any yet developed. A hog weighing 600 to 700 pounds, would have been a fortune to a man 20 years since in the United States. Many even now laugh with incredulity at the idea of making 120 to 130 bushels of corn per acre. Suppose a man had stated he had done so in 1820 to '24, his friends would have blushed for his veracity, or rather want of it. One must not run off at any big tale, but pursue his usual course; at the same time let us not shut our eyes to the light, try experiments on so small a scale that we can not be injured, and then having "proved all things, hold fast to that which is good."

There are large tracts of meadows in New Jersey opposite to this city, ditched and embanked as

Mr. McCaughan proposes to do those on the Biloxi bay. But the best, and indeed the only way to accomplish this, has been with the shovel and spade. No machine has yet been invented that could do the work as cheaply or as well as by hand labor; nor have we ever heard of anything in Europe. The steam-plow in England did not work well, and it cost more to turn the land with it, than by the usual method of plowing with horses or cattle. If there be a machine of recent invention, calculated to assist in ditching or embanking, and any of our readers can give us the information where it is to be found, we shall feel quite obliged by the intelligence.

For the American Agriculturist.

DITCHING AND EMBANKING MARSH-LANDS.

Mississippi City, March 28th, 1843.

Mr. A. B. Allen, Dear Sir: I am about beginning to ditch and embank 300 to 500 acres of beautiful salt marsh. It is just level with ordinary tides, at the head of Biloxi bay, and I shall have a levee 6 feet high, 20 feet base, and 9 feet wide on top to secure it from being broken in our severest storms. Seven hundred rods of levee will enclose 500 acres. It lies 15 miles from the mouth of the bay, and at the mouth of a small fresh water river, and is covered with a rich coat of native grass. I do not think it has salt enough in it to hurt it. We have no experience about the value of such lands, and I have but little idea of what will be their product when prepared for cultivation; they are the lands Dr. Cartwright thinks would be so valuable stocked in the Herba Spagna of Italy. I would now be willing to give 200 acres of the land to have it all leveed and ditched, which I think can be done for $1,500 at farthest. If you can give me any information on this particular subject, I will esteem it a very special favor; also the cost of a steam-plow on a small scale, as this is the land such a plow would be best adapted to. Is there such a thing as a steam-machine for ditching and embanking? This marsh being perfectly level, smooth, and free from roots, it must be well adapted to the use of such machinery. Yours truly,

John J. McCaughan.

For the American Agriculturist.

ICE-CREAM.

To two quarts of milk, add three beaten eggs, stir them together, and place over a fire till brought by stirring and a gentle heat to the consistence of cream. When warm, add a table-spoonful of diluted arrow-root or starch; then sweeten and flavor to your taste with lemon, peach-leaves, or vanilla, and set by to cool. When cold, pour the cream into a small pail, which insert in a larger one, well covered on the bottom with ice, and sprinkled with salt. Put ice in the space between the pails, and add salt to it as before. As the mixture freezes, stir it occasionally, till all is equally frozen. The above is improved by using half cream. If you flavor with peach-leaves or cinnamon, put them over to warm (not boil) with the milk, and then strain before adding the sugar. The ice must be put into the form after it is thoroughly congealed.

A Lady.

For the American Agriculturist.

WISKONSAN AND ITS PRODUCTS.

Manitou-woc, Wiskonsan Ter., April, 1843.

A. B. Allen, Esq., Sir:—

Having had the pleasure of seeing some of the numbers of your Agricultural paper in this region, and thinking a short notice of some things here might be interesting to a portion of your readers, I shall venture to trouble you with a short epistle. The name of my present resting place, above, may seem strange to many of your readers, but not stranger than the Pequot, Mohegan, and Narragansett, of the northeast, and Choctaw and Chickasaw of the southwest. The definition, like most of the Indian names, is full of significance and beauty; *Manitou* meaning their great Spirit, and *woc* his place or dwelling.

But where is it, is the next inquiry? It is somewhat diffusely located, it being the name of a river, county, harbor, and county seat; but all lying between two lovely sheets of water, Lake Winnebago on the west, and Michigan on the east. The country is delightfully situated, having a surface gently undulating, with hill and dale, and streams as pure, as well out of the granite hills of the north. This is the country of woodland and forest, yielding some of the finest timber, in great abundance. The prairies commence about 35 miles west of the lake shore in this latitude, and thence extend, with slight interruptions, I believe to the Rocky Mountains. The principal growth is Sugar Maple, Beech, Pine, and Oak intermixed. I have seen the most beautiful and extensive orchards of the first, stretching for miles over a clear grass sod, which would laugh to scorn all the feeble embellishments of art, around which were located, at convenient distances, the wigwams of the red man. These, during the sugar season, are always occupied by their owners, for the purpose of securing their annual supply of sugar.

In the spring of 1836, I was threading my way through this, at that time, *totally unoccupied* country, taking the route from Milwaukie to Green Bay, on horseback, in company with a western missionary, and a *half breed* mail-carrier as our guide. After camping out in the woods the first night of our journey, we came upon an extensive sugar ground towards evening, having passed several during the day, and making our way near the centre of it, we espied two large, snug, well-constructed wigwams, where we concluded to put up for the night. We unhorsed, tethered our beasts, and at the request of the inmates went in and prepared for our lodging. We found large rooms, piled up with the crystallized juice on two or three sides, part of it in large cakes, and another portion handsomely grained in large birch-bark *mo-koks* (if our orthography does not suit our occidentalist readers, they have my full permission to improve it), weighing from 25 to 40 lbs. each. Such a sugary I never before witnessed; and it was all accomplished by an old man, some 90 years of age, three or four well-favored, neat, comely-looking squaws, and the children. It was the season of trapping, too, and the men could not forego their harvest of peltry, and left this duty to be performed by those who could not be of service elsewhere. What added to their difficulties, was the total destitution of food, except what was afforded by the sugar, some wild roots, and an occasional wild duck, which the boys contrived now and then to secure, by the aid of their bows and arrows. I had an excess of provisions, and took out a large flat loaf of hard, unleavened bread, which I offered one group. Their eyes sparkled with delight, and at once the matron took a large knife, and divided it into as many *equal size* pieces as the number composing the circle, and to each she gave alike, the tottling papoose having as much as the matron herself —all of which was eagerly and ravenously devoured. Their gratitude for this small favor seemed to know no bounds; and they pressed on me cake after cake of sugar, and I verily believe, had I a wagon, I could have loaded it in return for my petty gift, which I added to subsequently by giving them all I could spare. But I was no "trader," and I forebore. Is it strange that our crafty, griping whites get rich out of the unstinted generosity of the red man? Verily "they shall rise up in judgment against this generation."

This was one of the pleasantest nights of my life; the novel, wild, picturesque, and beautiful seemed before me; the profusion of this luscious store, with all its appliances of boiling kettles, suspended over a large fire by a pole, supported by crotches, and running lengthwise of the cabin; the large, canoe-like trough, extending through the walls, with one end near the kettles, to contain the sap; the well-ordered apartments; the industry, intelligence, and kindness of the inmates; the historical reminiscences of the old man, who witnessed, while a stripling, and yet distinctly recollected, the chivalrous battle on the Heights of Abraham, 80 years ago, between those model champions, Wolfe and Montcalm; his tender age, like that of young Norval, inducing his father "to keep his only son, himself," from the tented field, though yet near enough to see and be interested in the bloody fray; a young urchin displaying much of the genius of an artist on the doors and walls adorned by his rustic, untaught sketches; and the robust forms, and open, intelligent countenances of all; these, and my reflections, stretching through the uncertain past, and probable future history of this proud, yet pitiable race, gave an intensity of interest to the scene, I shall never, never forget. But I am wandering.

The pines grow singularly in this country, pushing their straight trunks upward for 150 feet in height, by the side of the sugar maple and beech, which, at the east, choose very different soils. The soil is generally very good, though somewhat varying with the hills and valleys. The richest, deepest upland soil I ever saw, is on the Stockbridge and Brothertown reservation, on the head waters of the Manitouwoc, which was selected with a great deal of judgment, and after much examination, by some of the most intelligent Indians, and their friendly white superintendants. These Indians form an extensive settlement, of intelligent, moral, and perfectly reclaimed natives; the gathered fragments of many an extinct tribe from New England, whose ancestors once waged exterminating wars against each other, but whose descendants now are like a band of brothers, pursuing the peaceful paths of civilized life. I will add, for the honor of our Government, that they are in the full enjoyment of all the rights of American citizens.

The valley which opens at the county seat, Manitouwoc rapids, three miles from the harbor on Lake Michigan, though not extensive, is as fertile as any portion of the famed valley of the Genesee. Every crop which is cultivated there, thrives here in great luxuriance; and I have nowhere seen better returns for seed and cultivation than are furnished here. There is a good deal of enterprise among the settlers here and the vicinity, many of them having paid considerable attention to the improvement of their stock, Berkshires and Shorthorns already having become citizens of this region. Although the earliest settlements were not made here till 1836, there is already a goodly population; the county, notwithstanding its small dimensions, containing about 1000 inhabitants. Population is pushing its way into this territory rapidly, owing to the agreeable diversity of the surface, the purity of the waters, the salubrity of the climate, the richness of the soil, and the varied advantages of location. It has Lake Michigan on one side, and the Mississippi on the other, connected by a line of scarcely separated water communication, through the Wiskonsan and Fox rivers, to Lake Winnebago. This lake is within two miles of the river Manitouwoc, which empties into it. Steamboats from Buffalo pass its mouth daily during the season of business.

In addition to all the foregoing advantages, there are in the western and central portions of the Territory, rich and extensive beds of lead and copper, which probably extend eastward to the Lake. These are some of the inducements which point out this Territory, and especially the eastern portion of it, as full of promise to the hardy, industrious, and intelligent emigrant. The force of these advantages is seen in the press of settlers, who seem to be hurrying into this El Dorado, to secure their section or quarter section for themselves and their posterity.

I trust your exertions will not be wanting to induce more of these settlers to take good agricultural works of the day, that they may not fall behind in the intelligence which is, by these means, making such inroads upon the imperfect systems of farming which are still too much practised here, as well as elsewhere. I may write you again hereafter, from this enchanting country. Very respectfully, yours, VIATOR.

CATTLE SHOW AND FAIR

Of the New York State Agricultural Society, to be held at Rochester, September 19, 20, *and* 21.

List of Premiums for 1843.

ON CATTLE.

I. BULLS—*Three years old, and over.*

For the best,	$20	For the third best,	$8
For the second best,	12	For the fourth best,	

Copy of the N. Y. S. Ag. Soc. 'Transactions.'

II. BULLS—*Two years old and under three.*

For the best,	$15	For the third best,	$5
For the second best,	10	For the fourth best,	

Volume of 'Transactions.'

III. BULLS—*One year old and under two.*

For the best,	$15	For the third best,	$4
For the second best,	10	For the fourth best,	

Volume of 'Transactions.'

IV. BULL CALVES.

For the best,	$10	For the third best,	$4
For the second best,	6	For the fourth best,	

Volume of 'Transactions.'

V. COWS—*Three years old and over.*

For the best,	$20	For the third best,	$8
For the second best,	15	For the fourth best,	

Volume of 'Transactions.'

VI. HEIFERS—*Two years old and under three.*

For the best,	$12	For the third best,	$5
For the second best,	8	For the fourth best,	

Volume of 'Transactions.'

VII. HEIFERS—*One year old and under two.*

For the best,	$10	For the third best,	
For the second best,	5	Volume of 'Transactions.'	

VIII. HEIFER CALVES.

For the best,	$8	For the third best,	
For the second best,	5	Volume of 'Transactions.'	

IX. COWS—*Cross between the native and improved breeds.*

For the best,	$12	For the third best,	$6
For the second best,	9	For the fourth best,	

Volume of 'Transactions.'

X. HEIFERS—*Cross between native and improved breeds, between two and three years old.*

For the best,	$10	For the third best,	$5
For the second best,	7	For the fourth best,	

Volume of 'Transactions.'

XI. HEIFERS—*Cross between the native and improved breeds, over one and under two years old.*

For the best,	$10	For third best,	
For the second best,	5	Volume of 'Transactions.'	

XII. COWS—*Native breed (not having any imported blood).*

For the best,	$10	For the third best,	$5
For the second best,	8	For the fourth best,	

Volume of 'Transactions.'

XIII. HEIFERS—*Native breeds, between two and three years old.*

For the best,	$10	For third best,	
For the second best,	5	Volume of 'Transactions.'	

XIV. DAIRY COWS—*Of any breed.*

For the best dairy cow, from which shall have been produced in thirty successive days, the greatest quantity of butter, quality as well as quantity considered—which shall be exhibited at the time,

exhibited at the time,	$15	For the third best,	$5
For the second best,	10	For the fourth best,	

Volume of 'Transactions.'

No premium will be awarded unless an accurate statement of the manner of feeding the cow, management of the milk, and method of making the butter, the time it was made, the breed of the cow, if known, the time after calving; the cow as well as the butter to be exhibited at the time, with certificates from the person or persons who milked, and managed the cream, and churned the butter.

WORKING OXEN—*Over four years old.*

For the best pair,	$15	For the third best,	$5
For the second best,	10	For the fourth best,	

Volume of 'Transactions.'

STEERS—*Three years old.*

For the best pair,	$10	For the third best,	
For the second best,	5	Volume of 'Transactions.'	

In awarding these premiums, particular reference will be had to the close matching, excellent training, and docility of the animals, as well as their general good appearance.

FAT CATTLE.

For the best fat ox, cow, or steer, $20.

For the second best,	$20	For the third best,	$8

FAT SHEEP.

For the best wether,	$10	For the third best,	
For the second best,	5	Volume of 'Transactions.'	

Applicants for the premiums on fat cattle and sheep must furnish a statement of the manner of feeding the animal, the kind, quantity, and cost of food, to entitle them to the premiums.

ON HORSES—*Over four years old.*

For the best stallion,	$20	Best breed'ng mare & ct.	$20
For the second best,	12	For the second best,	12
For the third best,	8	For the third best,	8
For the fourth best,		For the fourth best,	
Volume of 'Transactions.'		Volume of 'Transactions.'	

For the best pair of matched horses, $15.

For the second best,	$10	For the fourth best,	
For the third best,	5	Volume of 'Transactions.'	

Three years old Studs and Mares.

For the best Stud,	$10	For the best Mare,	$10
For the second best,	5	For the second best,	5
For the third best,		For the third best,	
Volume of 'Transactions.'		Volume of 'Transactions.'	

A variety of horses possessing size, strength, and endurance for field labor, combined with that action which qualifies for the carriage or saddle—in short, the *horse of all work*, is probably the most profitable class which our farmers can now engage in rearing, and to such, therefore, will the preference of the Society be given.

SWINE—*Over ten months old.*

For the best Boar,	$10	Best breeding Sow,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best,		For the fourth best,	
Volume of 'Transactions,'		Volume of 'Transactions.'	

In awarding premiums on hogs, reference will not be had exclusively to size or to present condition, but to that form and that proportion of bone and offal to more valuable parts, which promises the greatest value from the least amount of feed.

SHEEP—I. LONG WOOLLED.

For the best Buck,	$10	For best pen of 3 Ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best,		For the fourth best,	
Volume of 'Transactions.'		Volume of 'Transactions.'	

For the best pen of five lambs, $5.

II. MIDDLE WOOLLED.

For the best Buck,	$10	For best pen of 3 Ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the the third best,	5
For the fourth best,		For the fourth best,	
Volume of 'Transactions.'		Volume of 'Transactions.'	

For the best pen of five lambs, $5.

III. FINE WOOLLED.

For the best Buck,	$10	For best pen of 3 Ewes,	$10
For the second best,	8	For the second best,	8
For the third best,	5	For the third best,	5
For the fourth best,		For the fourth best,	
Volume of 'Transactions.'		Volume of 'Transactions.'	

For the best pen of five lambs, $5.

The term "long-woolled" is designed to include the Leicesters, Lincolns, Cotswolds, and all the English varieties of sheep which furnish the quality of wool suitable for combing—the "middle-woolled," the South Down, the Norfolk, Dorset, Cheviot, native, &c.,—the "fine-woolled," the Spanish and Saxon varieties of the Merino and some of their crosses.

FARM IMPLEMENTS.

For the best Plow,	$50	Best threshing Machine	$20
For the second best,	30	For the second best,	10
For the third best,	20	For the third best,	
For the fourth best,		2 Vols. of 'Transactions.'	
2 Vols. of 'Transactions.'		For the best horse Rake,	8
For the best subsoil plow,	20	For the second best,	5
For the best Harrow,	8	For the third best,	
For the second best,	5	Volume of 'Transactions.'	
For the third best,		Best fanning Mill,	8
Volume of 'Transactions.'		For the second best,	5
For the best Cultivator,	8	For the third best,	
For the second best,	5	Volume of 'Transactions.'	
For the third best,		For the best straw Cutter,	8
Volume of 'Transactions.'		For the second best,	5
For best grain & seed Drill,	8	For the third best,	
For the second best,	5	Volume of 'Transactions.'	
For the third best,		Best improved ox Yoke,	5
Volume of 'Transactions.'		For the second best,	

Volume of 'Transactions.

Implements not presenting any new and valuable improvements, will not be entitled to premiums. Implements and machines must be tested, as far as possible, in the presence of the committee.

BUTTER AND CHEESE.

For the best sample of Butter, not less than 80 pounds	$20	For best sample of Cheese, not less than 100 pounds,	$20
The second best,	12	The second best,	12
The third best,		The third best,	
Two Vols. 'Transactions.'		Two Vols. 'Transactions.'	

The butter offered for premiums may be presented in butter tubs, jars, or firkins.

The claimants for premiums on butter must state in writing the time when it was made; the number of cows kept on the farm; the mode of keeping; the treatment of the cream and milk before churning; the mode of churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substances have been employed.

Those who present cheese for the premiums offered, must state in writing the time when it was made; the number of cows kept; whether the cheese is made from one, two, or more milkings: whether any addition is made of cream; the quantity and kind of salt used; the quantity of rennet used, and the mode of preparing it; the mode of pressure, and the treatment of the cheese afterward.

MAPLE SUGAR—50 lbs.

The best specimen,	$15	The third best,	$5
The second best,	10	The fourth best,	

Volume of ‘Transactions.’

Applicants for the premiums on maple sugar will be required to furnish a statement of the manner of making and clarifying the sugar.

CORN STALK SUGAR.

For the best experiment in the manufacture of sugar from corn stalks, from one acre of northern corn cultivated for the purpose, and the juice extracted by iron rollers so as to obtain the maximum quantity of sugar; with a full account of the process and expenses, $100

ON SILK.

Best half bush. Cocoons,	$15	For the third best	$5
For the second best,	10	For the fourth best,	
For the third best,	5	Volume of ‘Transactions.’	
For the fourth best,		Best spec'n manuf. Silk,	15
Volume of ‘Transactions.’		For the second best,	10
Best pound of reeled Silk,	15	For the third best,	5
For the second best,	10	For the fourth best,	

Volume of ‘Transactions.’

SILK REEL.

For the best,	$10	For the second best,

Volume of ‘Transactions.’

DOMESTIC MANUFACTURE.

Best pr. woollen Blankets,	$5	For the best hearth Rug,	$3
Best 10 yards of Flannel,	5	Best 12 yards Kersey,	3
Best 12 yds ¾ woollen Cloth,	5	Best 15 yards rag Carpet,	3
Best 15 yds wool Carpet,	5	Best 15 yds tow Cloth,	3
Best dble carpet Coverlet,	5	Best lb. sewing Thread,	2
Best 10 yards Linen,	5	Best pair knit Stockings	1
Best 12 yds linen Diaper,	5	Best pair wove Stockings,	1

ON VEGETABLES.

For 6 best stalks Celery,	$5	2 best purple egg Plants,	$1
3 best heads Broccoli,	2	Best half peck Lima Beans	1
3 best heads Cauliflower,	2	Best half peck Windsor do	1
12 best white table Turneps,	1	Best bunch double Parsley,	1
For the 12 best Carrots,	1	For the 3 best Squashes,	1
For the 12 best table Beets,	1	For the largest Pumpkin,	1
For the 12 best Parsneps,	1	12 best ears seed Corn,	1
For the 12 best Onions,	1	Best ½ peck table Potatoes,	2
3 best heads of Cabbage,	1	For 2d best half peck table Potatoes,	1
For the 12 best Tomatoes,	1		

Best variety of Seedling Potatoes, $5

Discretionary premiums will be awarded on choice garden products not enumerated above.

ON FRUITS.

For the greatest variety of table Apples, $5.

For the second greatest,	$3	For the third greatest,

Volume of ‘Transactions.’

For the best twelve sorts, not less than three of each, $3.

Best new Seedling Apple, $5.

For the greatest variety of table Pears, $3.

For the second greatest,	Vol. ‘Transactions.’
For the greatest variety of winter Pears,	"
For the best twelve Quinces,	"
For the best twelve Peaches,	"
For the best twenty-four Plums,	"
For the best six bunches of native Grapes,	"
For the best six bunches of foreign Grapes,	"

ON FLOWERS.

For the greatest variety and quantity, $5.

For the second greatest,	$3	For the third greatest,

Volume of ‘Transactions.’

For the best Floral Ornaments, $5.

For the second best,	$3	For the third best,

Volume of ‘Transactions.’

For the best Seedling Dahlia, $3.

For the second best, 2.

For the best twenty-five varieties of Dahlias, $5.

For the second best,	$3	For the third best,

Volume of ‘Tranactions.’

PLOWING MATCH.

First premium,	$15	Third premium,	$5
Second premium,	10	Fourth premium,	

Volume of ‘Transactions.’

Each competitor will be required to plow ¼ of an acre of sward land in 75 minutes; the furrows not to be less than 12 inches wide and 6 deep—plowman to drive his team.

FIELD CROPS.

(AT THE WINTER MEETING.)

Best crop of Wheat not less than two acres,	15	The third best,	
		Two Vols. ‘Transactions.’	
The second best,	10	Best crop Indian Corn not less than 2 acres	$15
The third best,			
Two Vols. ‘Transactions.’		The second best,	10
Best 2 acres spring Wheat	15	The third best,	
The second best,	10	Two Vols. ‘Transactions.’	

For the best crop of Barley, not less than two acres, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

For the best crop of Rye, not less than two acres, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

For the best crop of Oats, not less than two acres, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

For the best crop of Potatoes for the table, not less than one acre, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

For the best crop of Potatoes, quantity considered, not less than one acre, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

For the best crop of sugar Beets, not less than half an acre, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

For the best crop of Mangel Wurzel, not less than half an acre, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

For the best crop of Ruta Baga, not less than one acre, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

The best crop of Carrots, not less than one acre, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

The best crop of Peas, not less than one acre, $10.

The second best,	$5	The third best,

Volume of ‘Transactions.’

Those who present claims to premiums for farm crops, must state in writing the following particulars:—The condition of the soil at the commencement of cultivation for the crop; the previous crop and cultivation, and quantity of manure used upon it; the quantity and kind of manure the present season; the quantity and sort of seed used; the time and manner of sowing, cleaning, and harvesting the crop; the amount of the crop determined by actual weight or measurement; and the expense of cultivation. The land shall be measured by some sworn surveyor, and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quality produced from the piece of land mentioned in the certificate of the surveyor.

ESSAYS.

(*For publication in the next volume of Transactions.*)

For the best essay on the different varieties of wheat,	$20
For the best essay on the diseases and insects injurious to the wheat crop,	20
For the best essay on subsoil plowing; with the results of actual experiments in the state of New York,	20
For the best essay on the introduction and culture of new agricultural products,	20
For the best essay on the diseases of silk worms in this climate, and the means of prevention and cure,	20

DISCRETIONARY PREMIUMS

will be awarded for such implements and products not enumerated above, as shall be deemed worthy of notice and encouragement.

RULES AND REGULATIONS.

Applicants for premiums are requested to pay particular attention to the premiums on dairy Cows, fat Cattle and fat Sheep, Butter and Cheese, field crops and Sugar.

The statements required from those who compete for field crops, must be sent to the Recording Secretary, Albany, previous to the first of January, 1844, and the premiums will be awarded at the annual meeting of the Society, on the third Wednesday of January.

All premiums will be paid in cash or plate, at the option of the winners.

The premiums for Essays and for agricultural Implements, will be open to the United States; but all others will be confined to residents of this state, who are members of this Society, or who may become so by the payment of one dollar on entering their articles.

Competitors for the premiums on Essays must forward their manuscripts to the Recording Secretary, at Albany, previous to the first of January, 1844, free of postage.

☞ Particular rules and regulations of the exhibition, together with the list of awarding committees, will be published hereafter.

The measure used to ascertain the quantity of milk given by Mr. Smith's cow, was the wine quart, the same as is generally used in England, according to Mr. Berry's report of great milkers. The only utility that we can perceive in cutting the tail, is to let blood, and this could be better done in the usual way of lancing a vein; but this, as well as the application of spirits of turpentine, we consider entirely unnecessary. To produce the greatest quantity of milk, a variety of good food and exercise, under ordinary circumstances, is all that is necessary to ensure a strong steady appetite. For the manner in which great milkers are treated and fed in Great Britain, see Tour in England for the present number. Mr. Smith's cow has produced more milk than any other we have heard of in the United States, save a grade Durham, owned by Dr. Martin, of Kentucky. We have been informed that she averaged 41 quarts per day, for three weeks in succession. Her feed, during this time, was the best of clover and blue grass pasture.

For the American Agriculturist.

AN EXTRAORDINARY MILKER.

Repository of the American Institute, N. Y., May 10, 1843.

Dear Sir—The following communication in relation to a remarkable cow, which commanded the premium at the 15th annual fair, was made by Mr. Smith, the owner, at the special request of the premium committee, and was intended to have been embraced in the annual report of the institute, directed to be printed by the legislature; but owing to some neglect or mistake in the carriers of packages to Albany, it did not come to hand in time to be inserted. I shall therefore be obliged by your inserting it in the American Agriculturist.

T. B. WAKEMAN,
Cor. Sec., &c.

The full-blooded Durham Cow, Victoria, 8 *years old*, was purchased at a fair, near Liverpool, in September, 1840, by Captain Richardson, of the ship Brooklyn, and came to the present owner in July, 1841. No certain pedigree was obtained, nor can be, as she was purchased for private use, and the name of the person who sold her can not now be ascertained.

Her Milking Quality.—She calved on the 2d September, 1841. The calf was taken away the sixth day thereafter. On the 9th September, she gave 34¾ quarts of strained milk; on the 10th, 34½; on the 11th, 34; and for twenty days varied from 34 to 32 quarts per day; for three months in succession she gave not less than 32 quarts per day; and from the 8th of September, 1841, to the 8th of July, 1842 (including the winter months), the average quantity was 27 quarts per day: the milk was strained and measured once a week. As she will come in *fresh* the first of December, from the middle of July she fell off gradually from 15 to 12 quarts, the quantity she now gives. The quality of milk is excellent.

Her Feed.—Besides grass in its season, and hay, she was fed with ground corn and oats, meal, shipstuff, and vegetables, such as carrots, sugar beets, and potatoes; changing the kind of feed once a week, as it was found that on any one course of feed more than a week, the quantity of milk diminished, and by the change the quantity was sustained.

Treatment.—I had her tail cut once in 6 or 8 weeks, and allowed it to bleed freely, and at the same time put on her loins a spoonful of spirits of turpentine; immediately after each cutting of the tail and use of turpentine, her appetite was stronger and the quantity of milk increased.

Cyrus P. Smith.

Brooklyn, Oct. 17*th*, 1842.

JEFFERSON COUNTY AGRICULTURAL AND HORTICULTURAL SOCIETY FAIR.

The fair of the above flourishing society was held at Washington, Miss., on the 28 and 29 April, a full account of the proceedings of which, and the reports of the several committees, we find in the Free Trader. We would gladly copy the whole, but from the crowded state of our columns can only give place to the spirited letter of our correspondent, Mr. Affleck. We understand that the president, Col. B L. C. Wailes, gave an excellent address upon the occasion, with which we hope to be favored as soon as published. We perceive that Mr. Affleck objects to the great weight of our northern plows. We can make them as light as the south will please to have them; but this rather injures their effective work. We suspect the hands who use these plows, do not exactly understand their management; and we would refer to Mr. Cornell's letter in May No., p. 50, where weight and shape are explained; also to a communication of the same on the management of the side-hill plow, p. 370, Vol. I., of our paper.

For the American Agriculturist.

Ingleside, 29*th April*, 1843.

My Dear Sir:—Our fair is over; and I sit down, agreeably to my promise, to give you a short account of it.

You are aware, I presume, that we have had one of the most extraordinary springs ever experienced in this region—cold, wet, dreary, and extremely backward. Two heavy falls of snow, both, I think, after the middle of

March—much of the corn cut down—cotton only now making its appearance—many beautiful and somewhat tender trees, shrubs, and flowers, killed by the frost—no vegetables fit for the table, if we except a little asparagus, and a few peas, radishes, &c. Then, to wind up, we had, on the night of the 21st inst., the most fearful storm I ever witnessed. During the whole night it was one continued flash of lightning, with thunder to match, and rain in such torrents, as to flood the whole country, wash up the crops, carry away the fences and the most substantial bridges, and destroy hundreds of acres of cotton and corn. All these things combined to lessen the interest of our fair. Still we had a pleasant and an interesting meeting.

Yesterday, Friday, was the principal day, and fortunately, it proved a pleasant one, though dusty in the extreme to those who had far to travel. I should say that there were between 600 and 700 assembled in and around the church, to bear the president's address, a majority of whom were ladies. The front of the gallery and the pillars supporting it, as also the pulpit, were gayly bedecked with flowers and wreaths of evergreens, and on each side of the speaker sat vases of rare and beautiful flowers—decorations effected in the morning, by a committee of young ladies. The address was a happy one, and such as was expected from the known talent of the speaker. One part of it, however, casting a passing gloom over the spirits of all who have the welfare of the society and the improvement of our agriculture and horticulture at heart—that part, wherein he expressed his intention of resigning his office of president; an office he has so effectively filled during these first three years of the society's existence. The hope is strong, however, that he will be prevailed upon to accept of the continuation in office, that the vote of the society is certain to press upon him. But to the business of the day.

The rest of the doings were to come off in the college buildings and grounds, to which all now adjourned. There to the stock pens I now made my way, and found, to my sad regret, many of them untenanted, for reasons already given. Few could spare hands, from the necessary repairs of the damages effected by the storm, to bring stock; many, like myself, could not bring their animals, from loss of bridges, &c. The splendid toll bridge over the Homochitto was carried off, so that I was disappointed in bringing up the fine cows I boasted of, and also Mr. Foster's bull, Coronet, from Cold Spring. Still, there was a considerable turn out—especially of horses. Mr. Hall's enormous bull, Beltzhoover, and the Berkshire boar, Newbury, seemed to be the most "prominent faitures," as poor Power would have said. The latter, you know—the former is perhaps the largest animal of his kind you ever saw, and in the highest order: his skin shone like satin. He has improved greatly since he was last shown.

In the college halls I found assembled an array of beauty, that would have been dangerous for you, in your lone, bachelor state, to have faced! The number of the sterner sex, who were crowded in around them, showed how powerful their attractions were, when added to the bouquets of flowers, the fruits and vegetables, the numerous specimens of the handiwork of our planters' wives and daughters, consisting of quilts, worsted-work of various kinds, knitted or netted caps and capes and collars, rolls of linseys and cotton cloths, saddles and bridles, specimens of butter, &c., &c.

Another point of attraction, was the splendid collections of rare and valuable fossils, minerals, Indian remains, bones of animals, nondescript and now extinct, made by Col. Wailes, and by Dr. Dickenson. One room was devoted to these, and was crowded during the whole day.

No public dinner being served up, as has been customary hitherto, free to all, the company divided into parties, scattered over the grounds, to lunch—those of us residing near, carrying with us to dinner what strangers we could gather together.

To-day the members of the society met for the transaction of business, and with the expectation of a plowing match coming off, which was postponed on account of the late storm, and the impossibility of getting the teams forward. That there might not be an entire disappointment, I sent over one of the improved Peacock plows, and one of the side-hill plows, of Barnaby and Mooers' make, which you forwarded me. I have not seen the report of the committee, but fear they are entirely too heavy—they fagged our teams down completely. Yours, truly,

Thomas Affleck.

For the American Agriculturist.

SOUTHERN CALENDAR FOR JUNE.

Warm weather will now have commenced in earnest, and I advise the merciful man who "is merciful to his beast," to call all hands at 12 o'clock, and after having fed and curried all work animals, to be allowed to rest until 3 o'clock, being satisfied that the horse and driver can do as much work in the day, as by going all the time. For two months previous to this, I allow from 1 to 1½, or 2 hours in the middle of day, as the days acquire length and warmth. I have followed this plan for years, and my neighbors know that I am generally close alongside with any of them, *without Sunday work either*.

It is important now to stir the land every 10 days, and if farmers will lay aside the turning and shovel plow and use the cultivator, sweep, or double shovel, they can do so. The crop now having size to shake the earth somewhat, the hoes are not required so much, especially if the crop has been gotten over the second time early, and these implements started well up. The cotton will require the hoes to be passing through, so as to clear away all grass and weeds left by the plow, to clean round stumps and trees, and draw earth lightly around the plant, leaving no ridges as thrown with the plow, being less surface exposed to the sun's rays.

Early corn will be old enough to give the last plowing, which I do when in bunch, before tassel "heaves in sight." Before plowing, sow cow peas at the rate of a peck to the acre; the plows in plowing corn will scatter and cover them. They will be an excellent preventive against the weeds and grass springing up, after the blades are stripped for fodder, and will at the same time give a fine bite to cattle after corn is gathered, or afford an excellent manuring to the land.

The grain crop not cut now claims attention, and must be got off the land; and if got off the land in time, the land should be broken up with turning plows, and cow peas either sowed broad cast, 2 to 3 pecks per acre, or drilled at 2½ to 3 feet distance, 1 peck per acre, and covered with shovel plows.

The first planting of sweet potatoes will now require their last working; send hands along the row to lay the vines on the ridge, then start your shovel plows to run some 3 furrows between every ridge; hoes will follow to draw up this earth to the top of the ridge, cutting and pulling out all grass and weeds, and covering a part of the vines along the ridge, being careful not to cover the crown or the end of the vine. Continue to plant out drawings on the vine all this month, when suitable seasons; they will have time to make good potatoes yet. Vines make the best seed, and should be planted as follows:—Cut the vines about 1 foot long; have a hole made in the ridge with a dibble, as in planting the drawings; then, either with a stick, with a notch cut in one end, or the finger, thrust down a vine or two doubled, press the earth well around, leaving an inch or two out of the earth. For a winter crop of Irish potatoes, procure the long-red, and plant in rich low ground, as you did in the spring, excepting no leaves or straw. They will make a good crop if planted from 1st to middle of month. The garden will require some attention in keeping clean.

M. W. Philips.

For the American Agriculturist.

NORTHERN CALENDAR FOR JUNE.

In the early part of last month, the soil and atmosphere were kept continually saturated by transient showers and heavy rains, which have given an impulse to vegetation, sufficient, it is to be hoped, to counteract the temporary drought, frequently experienced in the early part of this month In case of such drought, it would be advisable to make frequent use of water in the flower borders, and also in the strawberry beds, by which this fruit will be enabled more fully to develop itself, and the plants produce a more abundant crop.

KITCHEN GARDEN.—The main point in this month, is to keep the garden entirely clear of weeds, as their growth will now be very luxuriant, and if thoroughly subdued, will be much more easily kept out the succeeding months. This is especially requisite with cucumbers and melons, around which the ground should be kept entirely clean and loose. Sweet potatoes should now be well cultivated, and the earth drawn up about the roots. Cabbages for autumn and winter use, can be planted out, and celery plants be transferred into trenches. Peas may be sown for late crops, although they do not bear so abundantly as those sown earlier in the season. Lettuce may be sown and transplanted every week, in order to ensure a regular succession through the season. This should be done in moist weather, or if in dry weather, late in the afternoon, accompanied with a plentiful watering. During the month sow kidney and other beans, for successive crops, and in the early part of the month, a few Lima beans may be planted for a late supply. Turneps for late crops may also be sown in this month.

FRUIT GARDEN AND ORCHARD.—During this month apple and other fruit trees can be trimmed. For this work, the present season is preferable to the winter, for the reason, that the sap, being in full circulation, will exude, and covering the wound, heal it in a short time. On the contrary, in the winter, no sap can exude, and the branch will frequently be quite dead for some inches from the wound. All useless limbs and upright shoots should be cut away, and the tree be trimmed to an open head. In plum-trees, all black knots, formed by the insect, should be cut away and burnt, or the disease will spread rapidly. Cherries will not bear much pruning, and it is generally best to allow them to grow naturally.

All stone fruits frequently bear in such profusion, that the tree is unable to mature them all, and they are thus of comparatively a small size. To remedy this, the cultivator should thin out the fruit by hand, leaving only a moderate crop; the nourishment of the tree being thus devoted to a limited quantity, will produce a larger and more delicious fruit. When trees are allowed to bear too abundantly, the great efforts made to mature all their fruit, will sometimes exhaust them to such a degree as to induce diseases, from which it will often take them several years to recover.

During this month, insects will frequently attack fruit trees in great numbers. For some of these, as the slugs and others of the same nature, a sprinkling of ashes or lime is the most immediately destructive. For the apis and smaller insects of the same habits, a solution of whale-oil soap, applied with a syringe, is the most efficacious. Caterpillars can be destroyed while they are yet in small clusters, by means of burning sulphur.

FLOWER GARDEN.—Plant out in the borders perennial and autumnal herbaceous plants, which have been sown in seed beds. This should be done near evening, and always accompanied with watering, unless the weather should be moist or wet. Box edging can still be trimmed during moist weather, as also hedges of privet, hawthorn, &c., although for these latter, earlier in the season would have been preferable. The turf in the pleasure-grounds and lawns should be kept well mowed; the oftener this is done, the more rich and velvety appearance it will assume. The gravel walks and carriage drives should be kept well cleaned, and free of weeds and grass throughout the summer.

It is in this month that the numerous wild flowers of our fields and woods abound in the greatest beauty and luxuriance; many of these are exceedingly beautiful, and well worthy of cultivation in the private garden. The Lobelia Cardinalis, which abounds in the swamps, is one of the most splendid of these, and with many others has been transferred to our own garden with entire success. To ensure their living, a portion of the natural soil should be transplanted with the roots, and a moist day, or late in the afternoon, selected for the purpose. Frequent watering should be applied for some days after. There are few who have not admired these gems, which so thickly cover Nature's carpet; and when they can be so easily transferred to the parterre, neither the botanist nor amateur should be willing to deprive himself of so cheaply-purchased a pleasure.

S. B. PARSONS.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steam-packet Caledonia, we are favored by files of European Journals to the 4th of May.

Markets.—Cotton, in the lower grades there had been a decline of ⅛ to ⅜ per lb., prices for the better qualities remained firm. The total sales during April at Liverpool were 115,000 bales, the receipts 300,000, leaving a stock on hand of about 800,000 bales, against 500,000 at this time last year. Business in the manufacturing districts is improving, and continues to be quite satisfactory. Flour and grain declining, and in limited demand. Tobacco, large sales. Naval stores and rice in fair request. Beef, brisk sales. Pork, dull. Cheese, the same. Lard and Tallow steady. Oil-cake, dull and not much demand expected till August or September.

Money.—There is no change since our last, and it continues abundant, large sums in specie are continually shipped to America for investment.

Stocks.—These at last begin to move again in Europe, and sales of New York have advanced 2 to 3 per cent.

Crops.—These are represented as generally promising, especially wheat and grass, which were very forward.

Irrigation.—We find an excellent paper in the London Farmers' Magazine on this subject, showing the beneficial and fertilizing properties of water in irrigation; more particularly when applied to meadows. But as this subject was pretty fully treated by us, under head of Tour in England, page 231, November No., we shall make no synopsis of the article. We wish, however, that we could impress upon our farmers the necessity and profit of irrigation in our arid summer climate.

A Wild Boar.—One of these ferocious animals was lately shot in the Forest of Raulaing, in the Vosges, which weighed 615 lbs. Nearly 1,300 shot were fired at him, and he killed more than 50 dogs.

Productiveness of the Vine.—Mr. Loudon states, that one plant of the red Hamburg sort, in the vinery of the gardens at Hampton Court, has produced 2,200 bunches, averaging one pound each, or in all nearly a ton; and its parent, in Essex, has produced 2,000 bunches, of nearly the same average weight.

Lime and Salt.—In one of Professor Johnston's experiments, he finds that lime is a good strengthener of the straw, and forwarder of the kerning and ripening of wheat and other grain; while salt appears to help fill the grain, and increase the weight per bushel.

Extraordinary Fecundity of a Cow.—The Blackburn Standard says, that five weeks since a cow, belonging to a farmer at Sudden Bridge, near Rochdale, in this county, gave birth to four calves, three males and one female. Two of them in color are roan, and the other lighter colored. The cow is of the Short-horned Holderness breed. The exhibition of this curious phenomenon has brought to the coffers of the lucky owner a considerable sum of money, and he has latterly been offered 150*l.* for the stock. The cow and her remarkable progeny are all doing well, even better than could have been expected. We understand this is the first instance on record of such a number of calves being brought forth at one birth.

Attar, or Otto of Roses.—We copy from the Gardener and Practical Florist, a simple method of making this delicious perfume, and trust that some of our fair readers will essay some experiments from American roses this season, and give us an account of their good or ill success. Otto of Roses is made from the hundred-leaved rose (*Rosa centifolia*), which species is also used exclusively in the distillation of rose water. The genuine otto of roses is not, it is said, prepared by distillation, but by putting a quantity of carefully-picked rose-leaves into a jar or cask, with just sufficient water to cover them. The vessel is then set in the sun for a few days, and in about a week the otto (a butyraceous) oil collects in the form of a scum upon the surface, and is removed by a piece of cotton.

Superiority of Span-Roofed Green-Houses.—Mr. McNab of the Caledonia Horticultural Society, contends that the *span-roof* is much superior for Green-Houses to the *lean-to.* But the house should extend north and south, so as not to be so much exposed to the rays of the meridian sun. East and west roofs make the temperature by day and night too unequal, and plants frequently perish in consequence of it. He found that the same kind of plants which become soft, spongy, and drawn up in the lean-to house, continued hard, woody, firm, and bushy, in a span-roofed house. It also required less heat, was more open to a good circulation of air, and the plants were not so likely to perish, for the temperature, winter or summer could be kept more equable.

Society of German Landowners.—Mr. Handley has furnished in the Journal of the Royal Agricultural Society, an interesting paper on the meeting, &c., of the German landowners. It is similar to that of the New York State Agricultural Society. It was established in 1837, and holds annual meetings, and publishes its Transactions. The meeting at Doberan occupied eight days, and every day the members, ladies as well as gentlemen, sat down to dinner at a spacious table, to the number of 700, the Grand Duke and his family heading it.

Fine Wool.—As the subject of fine wool is attracting much attention in the United States, we make some curious extracts from Mr. Handley's paper, showing to what an extreme the Germans carry this business. He says :—

"The fleeces, to the number of 300, were exhibited in a spacious tent, 150 feet long by 50 wide, placed upon tables, and most judiciously arranged under the direction of Mr. Jeppe of Rostock. It is impossible for a stranger to conceive the extreme attention paid to this subject in Germany, where immense flocks are reared for their wool alone, kept, during the greater part of the year, in large barns, and so carefully attended, that neither dew nor rain is allowed to fall upon them. In the King of Saxony's flock, which I visited, I found wethers kept to the age of nine or ten years, solely for the 2 lbs. of wool which they annually yielded. If subjected to a varying temperature, or checked perspiration, a knot is formed on the staple, to which my attention was directed by a very strong magnifying power, and which very materially deteriorates from the value they attach to the article. Next to equality, fineness of texture is the great desideratum; and a beautiful machine has been invented by Mr. Jeppe for the admeasurement of the thickness of the wool, and the proof of its strength, which unites the minute workmanship and delicacy of watch-work. By this instrument 100 hairs of each fleece, selected from nine different portions of the body, forming an average of fineness, are subjected to a given pressure, which is registered on a very minute index. The result of one experiment, I was informed, was that an Austrian fleece had been produced, of which twelve hairs only equalled in thickness one Leicester! The fleeces exhibited were sent from Saxony, Hungary, Austria, and from every sheep district of Germany.

"In the museum attached were samples of every wool in the known world, comprising even our most recently established colonies, carefully washed, weighed, and sorted, with such remarks as tended to illustrate the subject."

Agricultural Implements.—As those of Germany are notoriously antique, and badly constructed, we notice that many agricultural implements are now introduced into that country from England, and as our own are both cheaper, lighter, and frequently superior to the English, we would recommend to the mechanics of the United States to try their fortune in Germany.

Siberian Vetch.—This grows from 10 to 12 feet long; also the Siberian bear's claw, a new plant, said to be a strong one, very healthy for nursing ewes, requiring but light land, with deep roots, and shooting early in spring. Sheep like it so well that they leave no part uneaten.

Sheep Raised on Mulberry-leaves.—Much amusement was created by a gentleman whose ruling passion was to raise a flock of Merinos, on mulberry-leaves. He was followed about by an ancient ram, to which he supplied his favorite food from a basket which he carried with him.

We would recommend the said gentleman's coming over here with his sheep, and eating up our Morus Multicaulis.

Destroying Rats and Mice.—We find a simple, and as we think, an effectual remedy for the destruction of these vermin by Mr. Carr. A little manœuvring may be judiciously used to attract the enemy to a suitable position—suppose any unoccupied room in an outhouse, where they particularly abound. Here they should be fed with any favorite food—fish or malt I believe they are fond of—and then with, not a preparation of arsenic, which they are much too clever to touch, but pills, the size of peas, made of equal portions of wheaten flour and powdered sugar, intimately mixed with one sixtieth part of that weight of dissolved phosphorus—say ½ oz. phosphorous to 1 lb. of flour and sugar; cold water should be added to make the mass manageable, and the pills finally rolled in dry flour, and kept secluded from light and air. A couple of pills may be thrown into each rat-hole, or any quantity left on a plate in a dark situation, by which the double object is attained of attracting the animals by the luminousness of the phosphorus, and preserving it from too rapid evaporation. The pills should be replaced as often as eaten, and that without grudging, as, although all the slain may not be found, it may be relied on that "every bullet has had its billet." Still, in a day or two, many rats will be seen running to water, where they die from excessive drinking. No domestic animal appears to be in danger of eating this preparation except fowls. Dry weather is most favorable to its successful application, as damp, whether of situaion or atmosphere, dissolves, and consequently weakens, the phosphorus.

RUST AND MILDEW IN WHEAT.—Wheat struck with the rust or mildewed, should be cut at once, no matter how green in appearance, as this is the only chance of saving anything from it.

COPYING ARTICLES WITHOUT CREDIT.—We have spoken of this thing till we are heartily tired of it. We have therefore come to the conclusion, that all exchange papers hereafter, except where it appears to be a matter of occasional inadvertence, which can not do us the justice of acknowledging the source whence they take their extracts, when copying from us, shall be struck from our list.

☞ Volume I. of the American Agriculturist being entirely out of print, we have struck off a new edition, and are now prepared to furnish all orders. Price, neatly stitched with handsome paper covers $1; bound in cloth, gilt, $1.25.

Editor's Table.

NOTICES OF THE PRESS.

Transactions of the New York State Agricultural Society, *together with an abstract of the proceedings of the county Agricultural Societies, for the year* 1842.—This is an octavo volume of upward of 500 pages, with numerous embellishments. Several of the papers are able and well written; and others we think pretty flat, with nothing sufficiently new or striking to recommend them for publication. The reports of the county societies were greatly cut down by the secretary, and in most instances we think might have been omitted altogether. We can not perceive the utility or profit in making the Transactions a complete omnium gatherum for the whole State, and half the world besides, and publishing them in an expensive volume that few will ever read.

The Transactions, in our humble judgment, should be confined solely to the proceedings of the State Society, and its Prize Essays, and such facts from the County societies as are new, striking, and of marked practical utility. But in this matter, as we understand, there is little or no discretion allowed to the corresponding secretary, and he is obliged to make out such reports, and give such papers, as are forwarded him for insertion. Mr. Randall has therefore made the best of his subject with his usual ability, and deserves the thanks of the community for his services. We have before said, and repeat, that the secretary ought to be a salaried officer, and devote his whole time to the affairs of the society. If another year the expense of printing could be cut down one half, and that amount appropriated to this object, it would prove much more beneficial to the society and the agricultural community at large. We should like much to quote a few pages from the Transactions, but have not room for even a synopsis. We are obliged to Luther Tucker, Esq., Recording Secretary of the Society, for the receipt of the publication.

The Revised Statutes of New York, *reduced to questions and answers, for the use of schools and families, by William B. Wedgewood, Esq., published by Saxton & Miles, 205 Broadway.*—This is one of the most useful works that could be published. It should be immediately put into the hands of every scholar in the state of New York. We should not allow our children, who are to take our places, and make and defend the laws of our land, to grow up entirely ignorant of the first principles upon which our government is founded.

The Pictorial History of the United States, *from the discovery of the Northmen to the present time, by John Frost, to contain* 1120 *pages, octavo, with numerous embellishments, and be completed in twenty parts, monthly, at* 25 *cents each.*—Nos. 1 and 2 of this work are now out. It is written in a clear, forcible style, is exceedingly well got up, and supplies the very history that has been long wanted for popular use in the country. Saxton & Miles, publishers.

The Farmers' Encyclopedia.—No. 6 is now issued, which ends the letter C. Price 25 cents each No. Carey & Hart, Philadelphia.

The Encyclopedia of Murray's Geography.—We are in receipt of No. 7 of this able work, price 25 cents per No. Lea & Blanchard, Philadelphia.

The Horse, *a new edition, by William Youatt, London,* 1843.—This celebrated work has been completely revised, and much of it almost entirely re-written by its able author, who, from being a practical veterinary surgeon, and one of the editors of the Veterinarian, and withal a great lover and excellent judge of the animal, is particularly well qualified to write the history of the noblest of all quadrupeds. The book comprises nearly 600 pages, and is got up in a typographical style, far superior to the first edition. The embellishments, also, are very superior, and will class among the finest wood-cuts we have ever seen. The number of these is considerably increased in this volume; and what makes them of more value, they are actual portraits of the most celebrated horses of the turf, field, road, draught, and ponies of England. We observe a quotation at page 41, from one whom he may justly call "a valued correspondent," viz., Francis Rotch, Esq., of Otsego, this state, on the superior constitution of American stock. Mr. R. gives his opinion from considerable experience as a breeder in both countries. We have often expressed the same views, especially in regard to horses, which have been received with great credulity in certain quarters. We have, however, beat the English in trotters, and we shall see when a trial ever takes place, if we can not do it in a bruising race, where bottom is the grand test. Other domestic animals, we are confident, improve here in constitution.

Messrs Lea & Blanchard of Philadelphia, have republished the above work, omitting a few of the first pages, and have supplied their place by matter quite as valuable, and perhaps more interesting to the reader in this country: it being nearly 100 pages of a General History of the Horse; a Dissertation on the American Trotting-Horse, how Trained and Jockeyed; an Account of his Remarkable Performances; and an Essay on the Ass and Mule, by J. S. Skinner, Esq., of Washington, Assistant Post-Master General, and late Editor of the Turf-Register and American Farmer. Mr. Skinner is one of our most pleasing writers, and has been familiar with the subject of the horse from childhood; and we need not add, that he has acquitted himself well of his task. He also takes up the important subject, to the American breeder, of the Ass and Mule. This he treats at length, and *con amore*, and gives two well-authenticated instances of a mare mule breeding.

The Philadelphia edition of the Horse, is a handsome octavo, with numerous wood-cuts and neatly bound, and is afforded at the low price of $2. We trust that it may have, as it richly deserves, a large sale.

The American Railroad Journal, and Mechanics' Magazine, *monthly,* 32 *pages octavo, price* $3 *a year, edited by George C. Schaeffer and D. K. Minor.*—We are glad to see this excellent periodical revived, and now have the first 5 Nos. of Vol. I. of the Third Series before us. Such a work is much wanted in the United States, and we trust that it will receive that encouragement from the public which it so highly deserves.

The Planter, *published weekly, in newspaper form, by Dubose & Johnston, at Columbia, S. C., at* $2.50 *a year. J. J. Dubose, editor.*—We are favored by the first 3 Nos. of this paper, and find nearly half its pages filled with original and well-selected agricultural matter, and we wish the publishers success in their useful undertaking.

The Second Annual Report *of the American Institute, on the subject of Agriculture,* just published as a Legislative document, is an excellent and interesting pamphlet of upward of 100 pages, from which it is our intention to cull some extracts next month. It represents the Institute in a flourishing condition, the receipts for the past year having been $8,885.90, and the expenditures $8,724.87, leaving a balance in the treasury of $161.03.

Obituary.—We learn with deep regret from the Virginia papers of the past month, of the death of the distinguished writer, and practical agriculturist, Hon. James M. Garnett, at his residence near Loretto, Essex county, Virginia. We were not personally acquainted with Judge Garnett, but had occasionally corresponded with him, and several of his communications have appeared in this paper. He has also been for a long time a voluminous contributor to the agricultural press, more generally in his own and this state. These papers have usually been widely circulated and copied, and have been the means of effecting much good for agriculture. They were written in a pleasing style, and abound in thoroughly practical matter.

But a short time previous to his death we received a letter from Judge Garnett, complaining of feeble health; yet we little thought to hear of his being so soon numbered with the dead. Of his personal history we have slight knowledge, and hope that a memoir of him will soon appear from some member of his own family, which will be received and read here at the north with much interest, for few were more generally known by reputation among our agricultural community, or more highly appreciated than James M. Garnett.

To Correspondents.—Americus, J. R. Barbour, and W. H. Sotham, were unavoidably postponed in making up the paper. They shall appear in our next. We are in receipt of communications from A. Beaty, William Partridge, S M. W. Philips, R. L. A.

FOR SALE—Village Property, Improved Farms, and Grist Mill.

The subscriber offers for sale his Residence, the adjoining Dwelling-house and Store, and the Tavern Stand, "Bainbridge House," all situated on the public square (opposite the Presbyterian and Episcopal churches), in the beautiful village of Bainbridge, Chenango county, not surpassed for beauty and healthfulness, by any village west of Catskill, being in the valley of the Susquehannah, and on the bank of that much-admired river. The Dwellings are each double two-stories, with suitable outbuildings; the Gardens large; and the court-yards well supplied with various kinds of shade Trees and Shrubbery. The Store is two stories, in the centre of the village, and well arranged for business. The Tavern House is a large two-story Building, with Piazza the whole front, on the square, in good order, and with a suitable Barn and Sheds. The occupant is doing a good business. The Grist Mill is adjoining the village and Corporation, has two run of stone, and a good share of business, and five acres of land attached, with a small convenient dwelling-house to accommodate the miller.

Fifteen valuable Improved Farms of 100 to 300 acres each, with Houses, Barns, Sheds, and Apple Orchards sufficient for their use, situated in the immediate vicinity of the villages of Unadilla, Bainbridge, South Bainbridge, Bettsburgh, Ninevah, and Harpursville. Several of these farms are adjoining the New-York and Erie railroad, as laid out, and are of the first quality dairy farms, now stocked, which might be had with the farms if desired.

Also the "Vallonia" Spring House Establishment, with 90 acres of land adjoining the New-York and Erie railroad, including a good House, well fitted up for boarders, a new Store, with a small Dwelling-house, and suitable Out-buildings, Barn, Sheds, &c. This spring is mineral, and at present much frequented by invalids for its medicinal qualities; and upon the completion of the railroad will no doubt be a fashionable resort for those in quest of health or pleasure, it being delightfully situated in a healthy and picturesque county. The above property will be sold in parcels to suit purchasers; and a large proportion of the purchase money may remain on bond and mortgage, for a term of years, at the option of the purchasers, or it would be exchanged for improved property in the city of New-York or Brooklyn. Inquire of T. T. Kissam, 169 Maiden Lane, (corner of South St.) New-York city, or of the subscriber, at Bainbridge, Chenango county, N. Y.

PETER BETTS,

WHEAT-SHEAF FARM ON STATEN ISLAND FOR SALE.

A recent domestic bereavement has induced the undersigned to offer his residence on Staten Island for sale. It is situated midway of the outer bay, on the sea-shore, eight miles from the Quarantine ferry, three from that of Rossville, and equi-distant from two others—Seguin's landing, and Port Richmond.

The condition of the Farm, the extent, value, and practical usefulness of the improvements, and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upward each, including an appropriate allotment of woodland; each division offering a moderately elevated building location. The condition of the soil is well known to be in the best working order.

Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product.

W. A. SEELY,
New York, Feb. 16, 1843. 218 *Fulton street*.

SHEEP FARM FOR SALE.

The subscribers offers for sale, or to let, their extensive Sheep Farm, situated in La Salle county, State of Illinois. The Farm consists of upward of 1,500 acres; over 400 being enclosed by substantial picket-fence, and improved; the balance, dry rolling prairie, and timber, most admirably adapted to sheep husbandry, for which purpose it has been used by the subscribers for the last two years successfully.

The Flocks of Sheep can be sold at the same time, if purchasers are inclined. They consist of over 1,500 good, strong, healthy, white-faced Cheviot breed; also, three fine Pauler Merino Bucks, purchased of a celebrated breeder at the east.

If the Farm can not be sold for cash, offers will be received for renting the same for two or three years.

Apply either to JOHN ROSE, Little Vermillion, La Salle, MURRAY & WARD, Chicago, Ill., or JAMES MURRAY & Co., Buffalo, New York; either of whom will give every information wanted.

POUDRETTE as a Top Dressing for Corn, Cotton, and Tobacco.

This manure has been found highly efficient as a top dressing for corn, and there can be no doubt that it will prove exceedingly valuable as a top dressing for *cotton* and *tobacco*. *One gill* applied to the hill of corn at the first, or *even* at the *second* hoeing, will make six to ten days' difference in the maturing of the crop—which oftentimes will save the crop from frost—one *third* to one *half* a gill to a stalk of cotton or tobacco, will astonish those who have never witnessed its effects, and abundantly repay the expense by the increased crop. To the cotton and tobacco planter residing near navigable waters, it will be found of great value, as it may be applied with as little labor as plaster, and at either period of dressing out the grounds.—Poudrette of an excellent quality may be had in Philadelphia, Baltimore, Richmond, Wilmington, Charleston, and Savannah; or of the New-York Poudrette Company, 23 Chambers St. New-York, by enclosing the money—$5 for 3, $10 for 6, or $15 for 10 barrels—to D. K. Minor.

Sale of Durham Cattle, Hereford Bulls, and South Down Sheep.

The subscriber, desirous of reducing his stock, will offer for sale at auction, on Wednesday, the 13th of September next, at 10 o'clock *a. m.*, at Three Hills Farm, 3½ miles west of the city of Albany, on the Cherry Valley road, 25 head of cattle, consisting of bulls, cows, heifers, and calves, and between 70 and 80 head of South Down sheep, comprising bucks, breeding ewes, yearlings, and lambs, bred from the stock imported by Mr. Hawes, in 1832, and from bucks imported since.

Messrs. Corning and Sotham will also offer at the same time and place, some of their celebrated Hereford bulls of different ages.

C. N. BEMENT.
Three Hills Farm, Albany, June 1st, 1843.

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnston's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo, $1; Gray's Botanical Text Book, $1 50; Lindley's Horticulture, $1 25; Gray's Agricultural Chemistry, $1; Downing's Landscape Gardening, $3 50; Do. Cottage Residences, $2 50; Liebig's Organic Chemistry, $1 25; Do. Animal Chemistry, $1; Buel's Farmer's Companion, 87 1-2 cents; Fessenden's Complete Farmer, 87 1-2 cents, Cobbet's American Gardener, 75 cents; Blacklock's Treatise on Sheep, 50 cents; The American Farmer's Instructor, $1 62; A Treatise on Cattle, $2 50; Dana's Muck Manual, new edition, 62 1-2 cents; Boswell's Poultry Yard, 50 cents.

BEVAN ON THE BEE—CHEAP EDITION.

THE HONEY BEE; its Natural History, Physiology and Management. By Edward Bevan; with thirty-five engravings on wood. *Price* 31 cents.

THE RURAL AND DOMESTIC LIFE OF GERMANY, with characteristic sketches of its cities and scenery. By William Howitt. *Price* 50 cents.

AN OFFER.—VOLUME FIRST of the American Agriculturist, complete, with title page and index. *Price* one dollar, stitched. Bound in cloth, $1 25. Persons paying *two dollars*, may have the first volume in neatly-bound cloth, and the second volume in numbers, as published.

SAXTON & MILES.

CHARCOAL & CHEMICAL MANURES.

The subscriber has 5 to 1000 bushels of fine Charcoal Screenings, which he offers for sale, at 12½ cents per barrel. He can also supply compound guano manure, and any of the other chemical manures, such as sulphate soda, sulphate of ammonia, &c. He will give estimates of cost of any composition that farmers may require for experimenting, &c., upon application, post paid. Engaged in the chemical manufactures for 30 years past, he feels confident of giving satisfaction in the articles ordered.

April 21. JOHN BARLING,
Commercial Works, Jane St., between Washington and West streets.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume 1 of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway, New York.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, JUNE 29, 1843.

ASHES, Pots,	per 100 lbs.	$4 62½	to	$4 69
Pearls,	do.	5 25	"	5 31¼
BACON SIDES, Smoked,	per lb.	5½	"	6
In pickle	do.	5	"	5½
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	22 00	"	23 00
BARLEY	per bush.	46	"	48
BEANS, White	do.	1 12½	"	1 25
BEEF, Mess	per bbl.	8 00	"	8 50
Prime	do.	6 00	"	6 50
Smoked	per lb.	7	"	7½
Rounds, in pickle	do.	4½	"	5½
BEESWAX, Am. Yellow	do.	28	"	30
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	13	"	15
Shipping	do.	6	"	10
CANDLES, Mould, Tallow	do.	9	"	12½
Sperm	do.	20	"	35
Stearic	do.	19	"	24
CHEESE	do.	4	"	7
CIDER BRANDY, Eastern	per gal.	43	"	45
Western	do.	30	"	35
CLOVER SEED	per lb.	5½	"	7
COAL, Anthracite	2000 lbs.	4 50	"	5 25
Sidney and Pictou	per chal.	— —	"	— —
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	55	"	57
Southern	do.	55	"	56
COTTON	per lb.	5½	"	10½
COTTON BAGGING, Amer. hemp	per yard.	— —	"	— —
American Flax	do.	— —	"	— —
FEATHERS	per lb.	19	"	28
FLAX, American	do.	7	"	7½
FLAX SEED, rough	per 7 bush.	8 25	"	8 50
clean	do.	— —	"	— —
FLOUR, Northern and Western	per bbl.	5 50	"	5 75
Fancy	do.	5 75	"	6 25
Southern	per bbl.	5 50	"	— —
Richmond City Mills	do.	—	"	— —
Rye	do.	3 25	"	3 50
HAMS, Smoked	per lb.	6	"	7½
Pickled	do.	4½	"	5¼
HAY	per 100 lbs.	35	"	40
HIDES, Dry Southern	per lb.	8	"	9½
HEMP, Russia, clean	per ton.	200 00	"	205 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	9	"	12½
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5	"	7
LEAD	do.	3½	"	— —
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 87½	"	3 25
Corn	per hhd.	13 00	"	13 50
MOLASSES, New Orleans	per gal.	22	"	23½
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	28	"	30
Southern	do.	26	"	29
OIL, Linseed, American	per gal.	75	"	80
Castor	do.	57	"	62½
Lard	do.	60	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 12½	"	1 37
PLASTER OF PARIS	per ton.	2 12½	"	2 31
Ground, in bbls	per cwt.	50	"	— —
PORK, Mess	per bbl.	11 00	"	11 50
Prime	do.	9 00	"	9 50
RICE	per 100 lbs.	2 25	"	3 00
ROSIN	per bbl.	70	"	1 06¼
RYE	per bush.	67	"	69
SALT	per sack	1 40	"	1 50
SHOULDERS, Smoked	per lb.	4	"	4½
Pickled	do.	3	"	3½
SPIRITS TURPENTINE, Southern	per gal.	32	"	34
SUGAR, New Orleans	per lb.	5	"	6¼
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	6½	"	7½
TAR	per bbl.	1 62½	"	1 87½
TIMOTHY SEED	per 7 bush.	11 00	"	12 00
TOBACCO	per lb.	3	"	7
TURPENTINE	per bbl.	2 50	"	2 75
WHEAT, Western	per bush.	1 20	"	1 23
Southern	do.	— —	"	— —
WHISKEY, American	per gal.	21	"	23
WOOL, Saxony	per lb.	32	"	37
Merino	do.	30	"	32
Half-blood	do.	25	"	27
Common	do.	18	"	22

New York Cattle Market—June 26.

At market, 900 beef Cattle, (750 from the south,) 85 Cows and Calves, and 1250 Sheep and Lambs.

PRICES.—*Beef Cattle* were very dull, and our highest quotations obtained with difficulty, viz.: $5 75 *a* 6 25 for qualities for retailing. 350 unsold.

Cows and Calves.—Sales of 65 at $20 to $25 *a* $28.

Sheep and Lambs.—All but 50 taken at $1 50 to $3 75 for Sheep, and $1 50 *a* 3 75 for Lambs.

REMARKS. *Ashes* continue to be in good request. *Candles*, the stock of sperm is light, and they are held firm. *Cotton*, the transactions have been comparatively limited during the past month, and the dulness of the article in Europe, has made holders here submit to a decline of ¼ to ½ cent since the arrival of the Columbia. Export since 1st September last, 1,903,607 bales; same time last year, 1,354,578; same time year before, 1,200,204. *Flour* is dull at quotations, and we think it has reached its highest price. *Grain.* Of *Wheat* we have only a light stock, and it is held firm, with an upward tendency; *Rye* has declined; *Oats* and *Corn*, plenty and dull. *Hemp*, in little demand. We hear of a superior quality of water-rotted, from the plantation of the Hon. Henry Clay, of Kentucky, having been sold in the Philadelphia market at $190 per ton. *Molasses*, dull. *Naval Stores*, in fair request. *Provisions* of all kinds rather flat, with the exception of *Lard*, which is in good demand. We see nothing particularly worthy of remark in other articles, save that *Wool* is brisk, and quite a probability of its advancing. The southwestern qualities are bringing a higher price than the northern, owing to their superior softness, which is attributed to climate alone.

Southern Business has commenced in the city tolerably brisk, and a reasonable trade from that quarter is anticipated for the coming season.

Money can be had in any quantity on first rate paper, for 3 to 4 per cent. per annum. On bond and mortgage, 6 to 7 per cent.

Stocks of the better kind are again on the advance, and in request.

Crops.—Wheat is suffering some from smut and the fly; and, although there are partial failures in particular districts, the yield throughout the country promises to be a full average. The harvest is now over in most of the southern states, and it has come in well. Corn is rapidly improving with our present fine weather. It is now getting somewhat dry, and a good rain would be acceptable.

The Subscriber will attend promptly to the execution of all orders for the purchase of stock, seeds, agricultural implements, and books. He has been more or less engaged in mercantile pursuits in this city for ten years, and has an extensive acquaintance and thorough knowledge of business in general. Cash or produce must invariably be in hand, before the order can be executed.

A. B. ALLEN, 205 Broadway.

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most
noble employment of Man.—*Washington.*

VOL. II. NEW YORK, AUGUST, 1843. NO. V.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

EARLY-SOWN WHEAT.

In our excursions in different parts of the country the present season, we have invariably found that those fields which were latest sown to wheat last fall, have suffered the most from the fly and winter-kill. Now is this generally the case throughout different sections of the country? If so, it becomes an important matter to sow early, and instead of leaving it till the last of September, or the fore part of October, as is frequently done here at the north, it should invariably be got in as early as the first ten days of September.

The only objection which we have heard to early sowing is, that it produces too rank a growth the following spring; but this is easily obviated by pasturing it for a week or two with sheep or young cattle, the last of April, or early in May. We have been informed that pasturing wheat in the spring on rich soils, not only renders it less likely to be struck with the rust, but it also thickens the crop, and operates as a preventive to the grain being lodged. When stock is turned on to wheat fields, great care should be taken to see that the ground be sufficiently dry to prevent poaching, otherwise it might cause serious injury to the crop. The advantages of early sowing now, if our observations prove correct as to the fly, would be very great; the disadvantages we are yet to learn. Wheat being the principal money crop in large sections of the northern and middle states, too much attention can not be paid to an improved culture of this great staple product. We shall be much indebted to any of our readers who will favor us with communications on this important subject.

FINE-WOOL SHEEP.

The article which appeared under this head in our No. of last month, was written with such haste for the press, that one important item in estimating the value that would accrue to the country from adopting a superior breed of fine-woolled sheep, was entirely forgotten. It was pencilled down in our notes, but was unfortunately overlooked in writing them out at length. It was this: On the same food, the quantity of wool would be increased at least one pound per head annually in adopting an improved breed of fine-woolled sheep, so that from the eleven millions of shorn sheep in the United States, 11,000,000 lbs. extra of wool would be obtained, which, reckoned at thirty cents per pound only (it is actually worth nearer forty cents per pound even as low as wool now is in this market), would increase the productive wealth of the farmers $3,300,000. Now add to this, as expressed by us page 98 last number, $2,227,000 for the improvement in quality, and we have an annual gain of $5,527,000 to the country from this source alone, which, according to our estimate, is more than doubling the value of the whole crop of wool now produced in the United States, we having set it down at present at $5,197,500. Adopt an improved breed of sheep generally, and the value of the wool crop would then be $10,724,500. And this is but one among the many benefits proposed to the farmers by adopting an improved stock, and an improved system of husbandry. When will the agricultural community of this land become awake to the importance of a steady, systematic, and enlightened practical course in these matters?

COMMERCIAL NURSERY AND GARDEN OF MESSRS. PARSONS & Co.

This extensive nursery and garden is situated within a short distance of the steamboat landing, in the town of Flushing, Long Island, and is a delightful two hours' sail from this city, up the East river, amid some of the most varied and picturesque scenery that can be found in the world. It was commenced in the year 1837, and now covers an area of more than 30 acres, the soil of which is well adapted for the general objects of a nursery and garden. It occupies part of an estate of 250 acres, inherited in a direct line from a maternal ancestor, Mr. John Bowne, one of the first settlers on Long Island, and who, in the year 1661, built the venerable mansion in which one of the proprietors now resides. In a country where so few antiquities exist as in ours, it is a great satisfaction to look at a fine old house, in excellent repair, with a date so antique upon it, and our pleasure was greatly enhanced by finding immediately in front of it, on the opposite side of the road, in a high state of preservation, a large, venerable oak, one of the two, under the grateful shade of which, the celebrated George Fox, the founder of the society of Friends, first preached when he paid a visit to this country. This oak is several hundred years old, and the stump of its mate which broke down from decay a short time since, still remains by its side.

And while upon this subject, we have a pleasing anecdote to recount of the preservation of these oaks. Some years since, the land where they stood belonged to a veritable Goth, we mean by this a "tree extirpator," a *genus homo*, we regret to say, which abounds rather too plentifully in this country. Well, his taste was to cut down these superb old oaks, and sell them for timber. Upon hearing this, the late Mr. Bowne, ancestor of the Messrs. P., to insure their preservation as long as time would allow it, purchased them of him, and the whole property around has now fallen into the hands of these young men, and the public may be assured that the remaining tree, will hereafter be guarded with all the care due to its venerable appearance and historical associations.

The main road on the north side of the island, passes directly through the nursery and garden, giving the passer-by a full view of its great extent and variety of tree, and shrub, and flower. On entering the grounds, the first thing which struck our attention, was the abundant room left for everything planted out, which we think is greatly in favor of the establishment; as by this arrangement, the trees, especially those of the ornamental kind, can throw out thicker and more bushy tops, and the growth of all is more symmetrical and even, and from our own experience we know them to be much hardier and healthier than under a closer cultivation. The great fault of nurseries usually is, that they lack space; and the plantings are consequently so thick, that the trees become spindling, crooked, mossy, and stunted in their growth; injuries which can never be wholly repaired, however well their cultivation may be attended to after transplanting. Trees, to attain perfection, must, like animals, grow steadily and evenly along; and it is by selecting the best varieties, giving them plenty of room, and paying all proper attention to their stock, that the Messrs. Parsons have in so short a time, gained a high reputation for the culture of choice, thrifty, and handsome trees.

Another great improvement struck us in the management of this nursery, and that is, a regular map is made of the grounds, and a register is kept of all the planting; the varieties of which generally occupy distinct heads or rows, and thus the danger in filling orders, of substituting one kind of fruit or flower for another, which has heretofore given so much dissatisfaction, is well guarded against. Our nurserymen can not be too careful in these matters; for it is a great disappointment, to say the least, after obtaining trees at a considerable expense, and waiting patiently a long time for their growth, to at length find the fruit just the reverse of what was wanted.

On entering the gate on the south side of these ample grounds, we were first attracted by a square of evergreens, containing many varieties of pines and firs, highly valued for their utility and beauty. Among these we noticed the Norway spruce, cedar of Lebanon, Irish yew, pinaster (stone pine), white pine, &c., &c.; the Scotch fir also, and the larch, which have been so extensively and profitably planted on the immense estates of the Duke of Athol. The white spruce, a dwarf tree, we do not recollect to have seen before, and we greatly admired its fresh foliage and symmetrical shape.

The shrub department next. drew our attention to its numerous and varied combinations of beautiful flowers and foliage. Of these we can scarcely give the names of even the most striking, and merely mention the shepherdia argentea, whose showy clusters of brilliant red berries are so much admired in their season; the cratægus glabra, a shrub imported by the proprietors from England, which they have found to endure the winter if protected from the sun, and which with its dark and glossy foliage promises to be a valuable acquisition to our stock of hardy evergreen shrubs. The Scotch broom (spartium scoparium), with its profuse clusters of bright, yellow, locust-like flowers is exceedingly beautiful, and we regretted that we were not there during its most perfect period of blooming.

The magnolias appeared very thrifty, and we noticed some fine specimens of the purpurea, conspicua, soulangiana, glauca, tripetala, Thomsoniana, and others, whose names we do not recollect. The seedlings of the glauca and tripetala looked thrifty, and a fine lot of the macrophylla were just showing their heads above ground.

The herbaceous plants exhibited a pretty assortment of delicate and showy flowers. Among the vines we noticed a large variety of the clematis and the honeysuckle, and also a large number of newly imported ones, whose adaptation to this climate has not yet been tested.

The forest-trees we found numerous and varied, indeed, all that are of known utility, or which are desirable for ornament, and many with which we were entirely unacquainted. The pavia coccinea is a beautiful tree of the second class, with a dark, green, and glossy foliage, and very brilliant, bearing scarlet flowers, resembling those of the scarlet trumpet honeysuckle. The robinia viscosa is quite a pretty dwarf tree, with flowers similar to the yellow locust. Among the maples were some varieties entirely new, and very desirable for ornament. The stock of ailanthus and of white abele comprised some fine trees. We also thought the ash-leaved maple extremely pretty. Of the roses we can scarcely speak, there were so many. Suffice it to say, that they embraced all the well known varieties worth possessing, and a considerable number of others entirely new to us. They were growing thriftily, and promised a fine bloom.

We next inspected the fruit department; where we found apple-trees 10 to 12 feet high, some very thrifty peaches, apricots, and nectarines. The cherries were remarkably fine; some three years from the bud would measure nearly 12 feet in height. They comprise all the known kinds. The proprietors showed us the results of a new plan they have adopted in budding the peach on the plum stock. The peaches done in this manner appeared very thrifty, and in no way inferior to those of the same age on their own stocks. The inoculation had also taken quite as generally as on the peach stock. This method of budding possesses a twofold advantage: the worm will not readily attack the stock or root of the plum, and the peaches are well known to bear much sooner, and to produce larger and finer fruit. The plums done on the same stock appeared remarkably well. We were also shown some thrifty apple-trees, which were grafted on the root during the winter before last. We highly approve of this method of grafting, for we found them unusually large of their age, and of a very straight growth. The apples on paradise or dwarf stocks were also doing well.

The strawberries comprised some twenty-five or thirty of the finest kinds. The currants, gooseberries, raspberries, &c., &c., were choice and of sufficient variety.

The proprietors are about enclosing with a hedge, a large piece of land for a Pomological garden, to contain specimen fruit trees, which they have hitherto scattered about the farm. They intend in this to test fully the quality of any new fruit, and their adaptation to this climate.

The house of Mr. S. B. Parsons is finely situated, and surrounded by a large lawn of some six or eight acres sloping to the west; affording an extensive inland view on one side, and on the other a beautiful prospect of the bay and sound, with the palisadoes of the North river, and the highlands of New Jersey melting away in the distance. This lawn, with land adjacent if it may be needed, the proprietors are making arrangements to convert into an arboretum, and hope in a few years to have planted there every variety of hardy trees and shrubs which can be procured. They already possess many rare kinds for this purpose, and among others, we were shown the Paulownia imperialis, the cedrus deodora, the quercus heterophylla, and other new varieties. Some new kinds of the maple, beech, and elm, struck our fancy as very pleasing. It is intended to plant the varieties of each species of trees in a group by themselves, in such a manner as to exhibit the most beautiful features of the landscape; and if they carry out their present plan, we may reasonably hope to see their place become one of the most delightful and instructive to the amateurs of trees, shrubs, and flowers, that is to be found in the vicinity of New York; and those disposed to visit it will always find that attention from the proprietors, which will be sure to make their excursion agreeable.

In addition to the ground already devoted to the commercial garden and nursery at Flushing, it can be increased any time that is necessary by taking in other parts of the farm; and the proprietors being possessed of ample means, and constantly in the way of importation from abroad, and additions from our own country, they will be found at the top of their profession, and prepared to fill orders to any extent; and we do not know where they may be addressed with a greater certainty of getting the right thing, and of a first-rate quality. There are some other matters connected with this establishment which we should like to notice; but the length to which we have already gone in this article, forbids our doing so at present. The excursion to Flushing was a delightful one in the extreme, and we became acquainted, while there, with several objects before unknown to us; and it is our intention occasionally to repeat it, for the purpose of making ourselves as familiar as possible with the treasures of the nursery and garden.

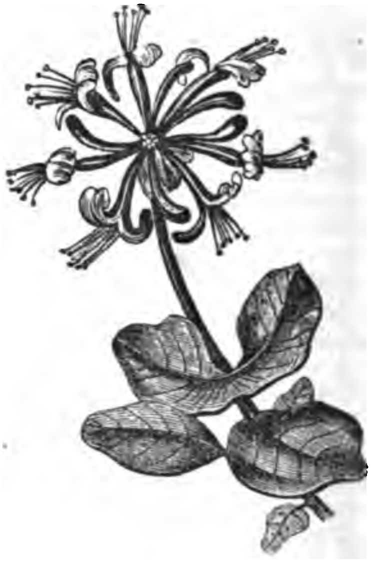
AMERICAN AGRICULTURAL EXPORTS.

We think that a bright day is beaming upon America, for she is not only shipping lead to those countries whence a few years since she imported it to a large amount, but she has now commenced carrying cotton to China, several ships having already sailed for that port with full cargoes; so that instead of being overwhelmed with the cotton production of the East Indies, as we somewhat feared we might be a year or two since, we are absolutely facing these countries in their own exclusive market. The next thing that we shall expect to hear of is, that our ships are clearing from port with full freights of *wool, lard-oil, and water-rotted hemp*. Well, if our farmers and planters *will beat* all the world in amount, perfection, and cheapness of product, why we *can not help it;* and our advice is to go ahead, all right, keep moving. We think Johnny go-cart rather the smartest fellow that is at present operating on this mundane sphere, and if he will only stop his grumbling about "hard times" he will now do well enough. If he can not clear sufficient money from a farm or plantation every three years to pay for it, he seems to think it is very hard, and that he "*ain't makin' nothin'*." But we gave him a *blue pill* on this head to digest last month, and we will see how that operates before repeating the dose.

THE HOVEN IN CATTLE.

In conversation recently with an intelligent farmer, we found him of opinion, that the hoove or hoven did not proceed from the generation of an undue amount of gas in the stomach, but in consequence of the windpipe being stopped up by too large a mouthful of grass, which cattle in their greediness when first turned on to rank, green food, frequently endeavor to swallow. He says he has repeatedly seen them relieved almost instantaneously by the use of the probang, or by merely taking a whip-stalk and inserting it into the windpipe, and thus shove the wad of grass into the stomach.

THE HONEYSUCKLE.



(Fig. 30.)

This beautiful flower is so well known that it needs no description. We have found nineteen varieties cultivated in the gardens in this vicinity, and how many more exist we are unable to say. It also grows wild the United States over, and is a great favorite, as well it may be, with the ladies

We wish it were oftener transplanted to their yards and gardens. In remote settlements, where cultivated flowers are scarce, resort should always be made to the wild ones around. Transplanting and good cultivation frequently greatly improve them, and under any circumstances, many which are indigenous to our country, are superior to the exotics for which we pay high prices abroad, and in addition incur considerable risk and expense in their transportation home. In cultivating wild flowers all this is saved, and a benefit in addition is conferred upon the flora of America. Neatly whitewashed, and surrounded by native flowers, even the humble log-house becomes a pleasing feature in the landscape, and adds much to its picturesque variety.

AGRICULTURAL SOCIETY ADDRESSES.

In the ensuing three months there will be several hundred meetings of agricultural societies, and at each of these there will be one or more addresses. The persons usually sought to make these are professional men, who, however well-informed they may be upon general subjects and able speakers, have not usually possessed that practical knowledge of agriculture, which would enable them to speak more instructively to their auditors. The consequence is, that their addresses deal in generals, and we have discourses beginning with Adam, and running down through Hesiod, Virgil, Googe, and Sinclair, to the most modern prominent agriculturist of whom the speaker may happen to have any knowledge in our own country; interlarded with something of the *clap-trap* about farmers being "the bone and sinew of the nation; the foundation and superstructure of society," &c.; all of which they have heard so often repeated, that they at last very sensibly begin to consider it as something of a bore, and bordering upon what may be technically termed *gammon*.

Now instead of these *declamatory generals*, we would recommend the addresses to be made of *practical particulars*.

There are a thousand subjects to talk about; for example, irrigation and the formation of water-meadows; ditching and draining, especially swamps and fever and ague ponds; peat and muck manure; the best rotation of crops for the locality of the society; the best kinds of stock for the same, and how it may be improved; the best varieties of poultry; the best kinds of grain, vegetables, grasses, fruits, trees, shrubbery, flowers, &c., &c.; for there is scarcely a limit to the interesting and instructive subjects that might be mentioned. Another thing, we think the addresses generally quite too long; they ought not to occupy over half an hour, unless there is something unusually interesting to discourse about, or some new discoveries to be made to the public.

TUSSAC AND ARUNDO GRASS.

In answer to that part of Mr. McCaughan's letter upon tussac grass, we give an extract from the despatches of Lieutenant Governor Moody of the Falkland islands, to Lord Stanley, one of the British ministry, just published in Part I., Vol. IV., of the Journal of the English Royal Agricultural Society. It is the *Dactylis Cespitosa*, and we have written out to England to see if some of the seeds can be obtained. It will be seen that the report upon it emanates from a high quarter, and however promising it may read, we have no doubt of the truth of the description and great value of this grass; and could its cultivation be introduced on to the waste lands of the southern seashore, it would prove a source of incalculable wealth, to that at present almost barren section of the country. And while upon this subject, we are delighted to learn that our southern friends have begun to look about them, and experiment upon some of their own natural products. Perhaps they may yet discover something, which, by a little cultivation, will prove of as great value to them as the tussac grass. There are several of the natural grasses on the prairies, which the first settlers took great pains to plow up and kill, that are now found by experience to be inferior, as grazing food, to no cultivated grass whatever.

The extract about the arundo grass (*arundo alopecurus*) is from a report of Mr. Hooker of the Falkland islands, to Governor Moody

There is another indigenous grass of inestimable value, which deserves the particular attention of every person connected with grazing and sheep-farming even in England, but more especially Scotland and Ireland. I allude to what is here called "Tussac." The tussac is a gigantic sedgy grass, of the genus Carex. I measured the length of the blades, and found them to average seven feet in length, and three quarters of an inch in width; some, in favorable situations, are longer, and if cultivated with care they would probably flourish still more vigorously. The plants grow in bunches close together, and as many as 250 roots spring from one bunch. In old plants the decayed roots of successive shoots form a cushion of dry entangled fibres, which raise the bunch from the ground. This cushion sometimes attains to a great size and height, so that a person standing in a patch of old tussac may be quite sheltered and concealed. The cushion is dry and inflammable; and where the wild cattle and horses have completely destroyed the plants by eating down to the very roots inclusive, these lumpy accumulations of decayed fibres are left encumbering the ground with a multitude of hummocks, easily removed, however, by fire.

The grass growing in large tufts upon the high base of decayed roots resembles, at a distance, a diminutive grove of thickly-clustered palms; and from the dark green and luxuriant appearance given to the smaller islands clothed with tussac, the richness of tropical vegetation is forcibly recalled to the memory.

All the other species of the genus Carex are described in botanical works as coarse and rank, and by no means adapted for fodder, but it is very different indeed with this species. That it is sweet-flavored, tender, and most nourishing, is evident from the avidity with which all animals feed, and the rapidity with which they fatten upon it—cattle, horses, sheep, and pigs alike. For about three or four inches the roots are very agreeable to man, being crisp, and of a sweetish, nutty flavor, very much resembling the heart of the palm-tree in the West Indies, which is called the mountain cabbage.

There is an island close to the settlement, which is fringed with the tussac grass for a breadth of about 200 to 300 yards, the remaining portion being wiry, coarse grass and moss on wet land. Lean cattle turned upon this island become fat in two or three months: and the miserable old horses that return from the cattle-hunting expeditions dreadfully out of condition, soon pick up, and become quite fat upon the tussac which grows there.

The two Americans who wandered upon West Falkland for 14 months, lived upon the root daily, and formed their huts of what I have termed the cushion, rolling one to the small doorway or opening when night came on.

The long blades of the grass make but an indifferent thatch, as it is much too brittle to last when dry; there are no fibres sufficiently tough or coarse for this purpose. I may notice that cattle and horses will readily eat dry tussac when they can not procure it fresh; but an ample supply of it can always be obtained, as it is green and luxuriant all the year round.

The bounty of Providence causes this extremely nutritious grass to grow most luxuriantly in the rank peat-bogs by the seashore, where any other, even of the most inferior quality, could scarcely live. I may say that by far the greater part of the coasts of these islands are fringed with it in many places to the breadth of half a mile: all the smaller islands are completely covered with it. It grows readily between clefts in the rocks, out of shingle and sand, close down to high-water mark; but it is most luxuriant where there is a depth of wet peaty bog. Whether it will grow upon boggy land further than half a mile from the sea, can only be determined by experiment. At the proper time I shall try it, and I entertain the most sanguine hopes that it will succeed, though perhaps it may not grow so luxuriantly as by the seashore.

If it should succeed upon inland bogs, such land could be made to yield as much nutriment for cattle as any other.

I am informed that a similar species of sedgy grass is to be found in the straits of Magellan, the Auckland islands, and many other places in the southern hemisphere; but, unlike its northern relations, the southern Carex appears everywhere to be tender, full of nutriment, and the favorite food with all cattle.

Extract from a later Report, dated October 1, 1842.—In my last report I noticed the extraordinary dryness of the atmosphere, produced chiefly by the constant winds of summer. During the past winter months of June, July, and August, the excess of dampness and moisture has been equally remarkable, unaccompanied, however, by rain, and, comparatively with England, there was but little snow. The ice has been sufficiently thick to bear the weight of a man twice, for two or three days together; and the thermometer has occasionally been as low as twenty-five degrees, and once eighteen degrees during the night. The wind has been by no means so strong or frequent as in summer; and calm days, with sunshine, occurred very often—much more frequently than in England.

Upon the whole, the winter, though considered in this place as very severe, would have been thought a mild one in England. The dryness of the air is now again beginning to be apparent, and a fine summer is anticipated; already the thermometer has risen as high as sixty-nine degrees. My present opinion, therefore, is that the winters in the Falklands may be considered very mild, but moist, though not rainy, and with little wind. The moisture does not arise from rain or fog, but from the nature of the ground (a light soil upon a tenacious subsoil), nnmerous springs and rivulets, and the absence of the evaporating winds of summer.

The plant described as the tussac by Mr. Hooker, in the enclosure which I had the honor of forwarding with my report, is of the genus Carex, and proves not to be the real tussac of the islands—which it very much resembles, and might easily deceive any person, the more so as it grows in the same situations, and is also eaten by the cattle. My friend Mr. Hooker has since given very great attention to this useful and interesting plant, which is a true grass, and in very much greater abundance than the other. As soon as I can collect some ripe seeds, I will also take the liberty of forwarding them; as perhaps your lordship may deem the grass worthy of a trial in England, both inland, as on chat-moss, and on the seacoast.

Some seeds of the tussac grass, sown in the government garden, in good soil, different from that in which it grows naturally, and at a little distance from the sea, have shot up, and are likely to prove that this valuable fodder for cattle may be cultivated in any soil; but it evidently prefers moisture, and would probably require irrigation in a dry soil at any distance from the sea.

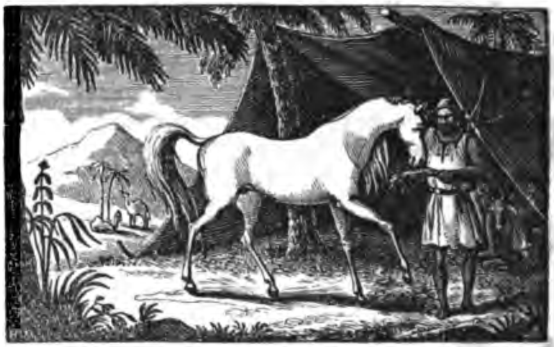
During several long rides into the country I always, as I have before stated. found the tussac flourishing most vigorously on spots most exposed to the sea, and in soil unfit for anything else to live in, viz., the rankest peat-bog, black or red. It is singular to observe the beaten footpaths of the wild cattle and horses, as marked as a footpath across the fields in England, extending for miles over wild moorland, and always terminating in some point or peninsula covered with this favorite fodder; and amidst which it is almost certain to meet with solitary old bulls, or perhaps a herd, or a troop of wild horses just trotting off, as they scent it from a great distance.

To cultivate the tussac, I would recommend that the seed be sown in patches, just below the surface of the ground, and at distances of about two feet apart, and afterwards weeded out, as it grows very luxuriantly, and to the height of six or seven feet. It should not be grazed, but reaped or cut in bundles. If cut, it quickly shoots up; but is injured by grazing, particularly by pigs, who tear it up to get at the sweet nutty root. I do not know how it would be relished as hay; but cattle will eat the dry thatch off the roof of a house in winter. Their fondness for this food is so great, that they will scent it at a great distance, and use every endeavor to get at it. Some bundles which were stacked in the yard at the back of the government-house were quickly found out, and the cattle from the village made repeated endeavors every night to get at them, giving much trouble to the sentry on duty to drive them away.

Arundo Grass.—Extract from a Report of Mr. Hooker, 5th September, 1842.—Another grass, however, far more abundant, and universally distributed over the whole country, scarcely yields in its nutritious qualities to the tussac; I mean the *Arundo Alopecurus*, which covers every peat-bog with a dense and rich clothing of green in summer, and a pale yellow good hay in the winter season. This hay, though formed by nature without being mown and dried, keeps those cattle which have not access to the former grass in excellent condition—as the beef which our parties, for the four winter months, supplied the ships with, can abundantly testify. No bog, however rank, seems too bad for this plant to luxuriate in; and, as we remarked during our survey of Port William, although the soil on the quartz districts was very unprolific in many good grasses which flourish on the clay-slate, and generally speaking, of the worst description, still the *Arundo* did not appear to feel the change; nor did the cattle fail to eat down large tracts of such pasturage.

THE ARABIAN HORSE.

(Fig. 31.)



The Arabian is acknowledged to be the foundation of all improvement in the breed of horses, either bred pure by himself in other countries, as for example, the English thorough-bred, or by crosses, as is shown by the stocks of different nations. He is remarkable for his beauty, docility, courage, speed, and endurance. He has been known to go 120 miles with hardly a respite; run 400 miles in the space of four consecutive days, 522 miles in six days, and after remaining three days to rest, returning the same distance in five days.

They inhabit the same tents with their masters, lying down while the children gambol upon them, and in fact are regarded like our household dogs as almost a part of the family; and it is this kind treatment undoubtedly, that makes them so affectionate and docile in return. The strictest attention is paid to their pedigree and selections in breeding, and hence their continuing from generation to generation without deterioration. The first we recollect of in our reading, as having been imported into England, was during the reign of Richard Cœur de Lion, in the 12th century, when he returned from the crusades in Palestine. The first introduced into America, we believe was during the revolutionary war. Several valuable importations have since been made, particularly by Commodore Elliott. General Eaton brought home a few when he returned from Tripoli. Those sent here about twelve years since, by our *chargé* at Constantinople, were a pretty lot. We recollect seeing them when first landed in this city. Stamboul was our favorite among them. It is generally supposed now, that the Arabian can no longer improve our own or the English stock of horses, and we are rather inclined to this opinion.

SHOW AND FAIR OF THE AMERICAN INSTITUTE.

We would call especial attention to the sixteenth annual Show and Fair of the American Institute, to be held in this city. It commences on the 9th of October, and will continue for at least one week. It promises to be the largest, most varied, and attractive, of any yet held by this highly useful and National Society; and what will add greatly to its interest this year, is the meeting at the same time of the Silk Convention, and the Convention of breeders. These two last will be very important meetings, and we trust that they will be fully attended from all parts of the United States. See Circular of the American Institute, and Convention of Breeders in this number.

The Reading-Room of the Institute is now open to visitors, and will prove a most agreeable and instructive lounge for all interested in agriculture, and mechanics. It is 40 feet square, and in addition to an extensive library, has numerous files of agricultural and scientific periodicals, open to all who desire an admission. It is pleasing to see the great and rapidly increasing attention among all classes to the subject of agriculture; it is beginning to be considered a science worthy the study of the most enlightened and profound.

IMPROVEMENT OF DOMESTIC STOCK.

UNDER this head we find in the Albany Cultivator for last month, a long and elaborate article, parts of which recommend a course of breeding so directly opposite to all true principles of which we have ever read, or heard, or seen practised, by anything like what we should consider authority in this matter, that we can not pass it over in silence; for if acted upon, it would totally destroy, in a single generation, every choice breed of animals that we now possess, and which it has cost this and other countries, so much time, labor, and money, to bring to their present state of perfection. The Cultivator says, page 107, July No.:—

"But it may be doubted by some, whether any improvement on the best of the present high bred cattle, is possible, and the idea of it be scouted as an absurdity. 'What,' it may be said, 'talk of improving a breed by crossing them with those still lower in the scale?" *We answer yes, and hope to shew there is nothing chimerical in the plan.* For illustration, we will again recur to the Short-Horns, as unquestionably at the head of the improved breeds. Breeders have enumerated a great number of points as going to make a perfect animal; to make one absolutely perfect, we will suppose that 30 enumerated qualifications are requisite; that the Short-Horns, as approaching the nearest to this standard, possess 20 of the desired qualities; and the other varieties or breeds in a descending ratio down to our native stock, which may be put as possessing but 5 of these requisites.' The question is, can an animal possessing 20 good points be improved by one possessing only 10 or 5? We answer yes, if the one possessing 20 is deficient in any of the points possessed by the lowest, or by 5. 20 may be deficient in hardihood or the power of enduring our seasons; in milking properties; adaptation to labor; quality of flesh; or some other point or points possessed in a remarkable degree by 5; and this deficiency remedied by a skilful cross with 5, which shall engraft and fix the valuable point on 20, would make it 21, or furnish a decided advance towards animal perfection."

Now the idea of improving an animal that has twenty good points, with one that has only five, we can not characterise by milder terms than saying, is as gross and perfect a piece of absurdity as we ever heard. The Cultivator seems to suppose, that man has the same plastic power over the animal creation, that the sculptor has over his clay model, and that wherever there is a deficiency in his subject, he has only to supply it with additional mortar, which he takes up from his heap at pleasure, or where there is an excess to simply pare it away! Now the only true principle of improvement in breeding which we ever heard of, is this: If an animal be deficient in any one point or more, it must be crossed by another animal *equal* to it in all its *good* points, and *superior* to it in its *deficient* ones; and then the chance barely is, that one half the produce may be *equal* to the *superior* animal thus used in the cross, and the other half not *inferior* to the *poorest*. But if an animal of twenty good points be crossed with one of only five, no experienced person would expect that the produce would possess over ten or twelve good points at most; and it would be a sort of miracle, if a single one of the produce had twenty-one good points infused into it. When animals are crossed, it is a law of nature that the blood mingles—it does not go in lumps. We must consequently take the bad with the good, and the extra hazard of deterioration, to which all breeds are constantly subject. We know that now and then, though very rarely, for example, breeding a superior Short-Horn bull to a native cow, and that produce, if a female, to the same bull again, that the third generation, the three quarter-bred animal, will sometimes be a very good one—to all appearance, nearly as good as the thorough-bred bull; but the produce of that three fourths-bred *can not be depended upon* for equal and exact breeding. We have seen cows that had only one two hundred and fifty-sixth part of native blood in them, (and very fine animals they were too, individually), bred to a choice bull, throw a calf occasionally very inferior, more resembling the dung-hill than the thorough-bred.

We suppose upon this principle, that to improve the Spanish fine-woolled sheep in hardiness (though we contend that the old fashioned Merinos were as hardy as anything that stands on four legs), the Cultivator would take a cross upon the old native, or other coarse-woolled breeds, thinking it could do so at will, without deteriorating the fine wool of the Spaniard. If so, let it look to Lord Western's experiments on this matter to be convinced of the ill success of such undertakings. Again, to give size and strength to the racer, it would take a cross with the cart-horse, the most contemptible mongrels upon which we ever looked. We should be very glad to know *where* such animals would be *placed* after a thorough training, and a fast turn of a few miles on the course. We do not mean any unfairness in our argument by taking the cross of two different kinds for an illustration, but to place the subject in a stronger point of view, the ass is longer-lived than the horse; now suppose we wish to increase the age of the latter, why then we should breed them together, expecting that we should get, to a moral certainty, this *one* good point in addition in the produce, without any deteriorating quality of the ass. But does the mule show this perfection? And if it could be bred to the horse again, and its produce on till finally a thousandth part of the blood of the ass only appeared in the progeny, would not the shadow of its long ears still be seen, and the falsetto of its unearthly bray occasionally be heard? How is it with the cross of the Caucassian and Negro races? Divine authority has asked, "Can the Ethiopian change his skin, or the leopard his spots?"

Yet enough, for it would seem that the Cultivator is not a convert even to its own bold assertions, for further on it says: "But there must be no breeding *downward;* every cross must be *upward* both in blood and desired qualities."

There are some other positions that the Cultivator takes in this article, which are denied. For example: "It is rare indeed, perhaps never, that any single point is found in the highest degree of excellence, except at the *expense of some other point.*" We doubt from the sentences which immediately follow this just quoted, whether the Cultivator understands what it is talking about.

We have not usually found, in our experience, "the deepest and best milkers of the herd the most raw-boned, not to say the worst-looking of the whole," but quite the contrary in well-bred Short-Horns. Did the Earl of Leicester improve the good milking qualities of the Devons at the expense of their fineness of points? Were the Ayrshires so improved? And are they attempting the same with the Herefords?

It is denied that Charles and Robert Colling were the originators of the Short-Horns; on the contrary, any reasonable amount of evidence can be produced in England, to prove that Charles Colling repeatedly said, he never bred anything equal to the Short-Horn cow, which he purchased of the agent of the Duke of Northumberland. Where is the Cultivator's authority for its assertion? We suppose we shall be told of Countess that sold for 400 guineas—the Galloway cross, and all that sort of thing. Well, we shall be glad to have our memories refreshed with the story, and when it is repeated in full, we shall see how much it will avail the Cultivator.

Did "Berry and Coates co-operate most effectually in forwarding the improvement commenced by them," [the Collings]? This assertion is really too rich, and we would fain ask for the authority on which it is made. The Cultivator adds, that the reputation of being good milkers, "does not belong to the improved breed." Short-Horns, we suppose it means. If it does not, we should be very glad to know then to what breed of cows it does belong. But this we opine would depend very much how they had been "improved." If by a cross with a scrub of 5 points, on a Short-Horn of 20 points, why then we have nothing more to say. We *knock under* to all such "*improvements.*"

The public will hereafter look to the Cultivator for a new era in cattle-breeding, and they may hope, some half century hence, by its new code of rules of "improvement," to get a decent milker or two! If the Short-Horn breeders put up with such gross calumnies upon their stock, why then we are greatly mistaken in their spirit, and the sooner their herds are driven back to the place from which they came, the better. We did really believe that some *few examples* had been given on this point, and that they had invariably offered to meet the breeders of native, or any other stock to milk with them—cow for cow, or herd for herd, however small or large the numbers might be. But since the Cultivator asserts the contrary, why we suppose we must fain believe it. But here we have another question to ask. Is the Cultivator sure that the cows mentioned in its May No., by Mr. Heslip, as giving so great a product of butter and cheese, are *pure* natives? We know that Short-Horn bulls have been taken into Trumbull county, Ohio, and it is our firm belief that many of the animals there are grade Durhams in some way. We shall take the trouble, if possible, to get at the facts in this case. But native or not, we think that the breeders of thorough-bred Short-Horns will have no fear of matching their animals against them in the production of butter and cheese, grass and hay fed, or kept in any other manner it pleases. For twenty-five cows to produce 13,715 lbs. of cheese, and 309 lbs. of butter, 548 lbs. each of the former, and 12 lbs. of the latter, we do not think so very extraordinary. We have heard of a cow making 21 lbs. of butter per week, and it was thought, with how much reason we do not know, that she might make 500 lbs. in the course of a year. What amount of cheese this would be equivalent to, we could not say, as this would depend a good deal upon the amount of caseine in the milk.

There are some other assertions in this article of the Cultivator, also a few paragraphs which have appeared from time to time in its pages, upon which we would like to offer a few comments, but our space forbids. We shall probably recur to them hereafter, as it seems to have an especial fondness for communications of this nature.

NEW YORK FARMERS' CLUB.

THE monthly meeting of the New York Farmers' Club took place, according to appointment, at the Pacific Hotel, in Greenwich street, on the 18th July. General Johnson, of Brooklyn, took the chair, and a numerous body of farmers were present on the occasion, and a very interesting and instructive meeting was the result. Large bouquets of flowers were brought in by different members to adorn the room, but we saw neither fruits nor vegetables. We hope each member will feel himself bound to supply this omission at the next monthly meeting.

Mr. E. Roberts, of Michigan, read an able and eminently practical paper on the agriculture of his state. A general discussion then took place, which was followed up by some verbal statements on the production of manure by Mr. Seely of Staten Island. These were considered so valuable, that Mr. Seely was requested to write them out for the benefit of the club, which he has cheerfully engaged to do. An elaborate Report of a Convention of Silk-growers, held at Northampton Massachusetts, September last was then presented. By this report it appears the silk business is rapidly increasing throughout the Union.

Mr. Henry Steele, of New Jersey, presented a leaf from an Isabella grape-vine raised by him, and gave a description of the same. The vine is five years old, and for growth of wood, foliage, and fruit, surpasses everything of the kind we have seen. The leaf measured from the point to the stem thirteen inches, and in width it measured much more. On the vine is a number of vigorous shoots measuring from ten to fourteen feet in length, and three eights of an inch in diameter, with fruit to correspond. He has taken "Hoar's Treatise on the Vine" as his guide, which he believes contains the true method of cultivating the grape to perfection. He will be pleased to show his vines to any who may have a desire to see them. He believes the same rules laid down in Hoar for the treatment of the vine, will apply equally well to the raspberry, which he has found greatly mismanaged in this section of the country.

Hon. Henry Meigs read a letter recommending the introduction of the Wapato (a species of potato) for cultivation, which it was thought might be rendered far more valuable than our common potato. It is found at the mouth of the Columbia river, and is much used there by the Indians as an article of food.

Mr. Samuel Stevens of Long Island read a communication on the cultivation of the strawberry, which elicited much attention. We shall publish this paper in our next, and the comments of members upon it at the time.

Mr. D. J. Browne, who has spent much time in studying the nature and disease of the trees of America, gave an opinion as to that which has so greatly afflicted the sycamore for the two past years. He said it was his belief, that the disease in the sycamore had been caused by a sudden suspension or congelation of the sap by cold and frost early in spring, after it had ascended to the extremity of its branches. He spoke at some length, and as a further corroboration of his opinion, he read a paper on the destruction of the sycamores in Great Britain in 1809; but as a committee is appointed to investigate the subject, we shall defer publishing this till we get their report.

Dr. A. Jones exhibited an ingenious machine of his own invention for watering streets, and irrigating meadows and gardens, either by hand or horse-power. We were much pleased with it, and intend giving an engraving of it hereafter, with a description. It would be an invaluable instrument for the gardener, and can be seen any time at the American Institute.

Several committees were appointed to report on different subjects, and the club adjourned at 5 o'clock, P. M., after a very pleasant and profitable meeting.

A delegation of five of the members of the club was appointed to visit the Exhibition of the Horticultural Society of Boston, to be held in September. A social and beneficial intercourse will thus be established between the agriculturists of these two sections of the country.

The next club meeting will be held at 12 o'clock on the 15th August, at the Pacific Hotel, Greenwich street. Strangers in the city, and the farmers and horticulturists of this vicinity are invited to attend.

AMERICAN INSTITUTE OF THE CITY OF NEW YORK.

Sixteenth Annual Fair.—The great Annual Fair of this Institute, and exhibition of specimens of the productions of labor, art, and genius of our country, will open at Niblo's Garden, in the City of New York, on Tuesday, the 10th day of October next, at 9 o'clock A. M. Friday and Saturday previous, are assigned for the reception of articles generally, whether for exhibition merely, or in competition for premium; and Monday, the 9th of October, for arranging the articles brought to the Fair. Exhibitors, whether for competition or not, desirous of favorable locations for their contributions, should bring them the first receiving day, or early on the second, as it will enable the managers to perfect the general arrangement of the articles in season for opening the Fair to the public. Special days and times will be allotted for cattle and other stock, and for certain articles, such as flowers, &c., designed for the Agricultural and Horticultural rooms. Future circulars will furnish additional particulars.

Farmers, gardeners, manufacturers, mechanics, artisans, and friends of improvement generally throughout our Republic, are invited to second the efforts of the Institute with their wonted American spirit, which, for fifteen years past, has made its anniversaries the pride of our country, and imparted to them that national character, which the legislature, in the formation of its charter, contemplated. Gold and silver medals, diplomas, and other valuable bestowments, will be conferred as rewards for skill and industry, under the sanction of competent and disinterested judges; and all the preparations and accommodations for both exhibiters and visitors, will be provided with the same liberality as on former celebrations.

The whole receipts of the Institute have ever been deemed as so much placed in trust to be dispensed for the promotion of American industry and improvements; and they have always been faithfully disbursed. This Institute, acting in the place of a County Agricultural Society, under a general law of the state, feels that the farming interest have high and continued claims for special regard. In addition to the exhibition of cattle, horses, sheep, swine, &c., efforts will be made to obtain a very full display of all the varieties of poultry. A plowing match will also be held in this vicinity.

The productions of the factory and the workshop, of the loom, the forge, and all the varieties of handicraft machinery, with new and useful inventions, will have places reserved for them. Steam power, for giving motion to machinery, and instruments for measuring the power required for various purposes, will be provided. Exhibiters should bear in mind that their specimens will be spread before more than two hundred thousand people, and be noticed in newspapers and publications that go into all parts of the world. A number of appropriate and eloquent addresses, beside the Anniversary, will be delivered in the large saloon, and at the Cattle Show, Plowing Match, Silk Convention, &c.

Special premiums will be bestowed on the exhibition of the greatest variety of valuable household manufactures. A conspicuous place will be reserved for the beautiful displays of the productions of female hands, which for fifteen years have delighted those immense throngs that have crowded our halls and saloons. Extraordinary efforts will be made to procure a full display of American silk. The statistical returns of increasing quantities the last few years, bring us inevitably to the conclusion, that this precious commodity is destined soon to rank with cotton and wool, in its importance as an American staple. For the purpose of accurately ascertaining the present condition and future prospects of this branch of domestic industry, a Silk Convention will be held in the City of New York, some time during the Sixteenth Fair. Every silk culturist and manufacturer in the Union is invited to bring their best specimens, with all the correct data at their command; from which a report will be compiled and distributed through the country, that will, we trust, for ever settle the question in favor of the cultivation of silk in the United States. We call upon all silk culturists and manufacturers to aid in this laudable object. The cry is from all quarters loud and often repeated; "Give us a new staple to diversify labor, and new employment for that which machinery has displaced, and consummate our practical national independence."

In the growth of silk we have an article providentially adapted to all our varied soils and latitudes, well calculated to counteract sectional selfishness, and to produce a harmonious moral influence; and the vent for it in the markets of the world will exceed our ability to produce for centuries to come. Let us, if the silk culture and manufacture are feasible, and can be made to remunerate, advance at once to the point required. And how can this be better ascertained, than by a collection of facts by means of the coming exhibition and convention?

We invoke the aid of those far reaching, penetrating, disinterested minds, with true American hearts warm in their country's welfare, who can appreciate the benefits of associations like the American Institute, employing its whole means to invigorate industry, quicken invention, and impart activity and fire to genius, spreading its peaceful, genial influences far and wide, to make man better, and multiply and diversify his comforts. Every village, district, and neighborhood, and almost every family, should furnish some contribution, and be themselves welcome participators in this great annual national jubilee.

New York, July 4th, 1843.

James Tallmadge, *President*,
Adoniram Chandler,
William Inglis, *Vice Pres'ts*
Shepherd Knapp,
Edward T. Backhouse, *Treasurer*,
Gurdon J. Leeds, *Rec. Secretary*,
T. B. Wakeman, *Cor. Secretary*,
Trustees.

P. S. Editors of newspapers and other periodicals will confer a favor on a large portion of their readers, and oblige the American Institute, by one or more insertions of the foregoing address.

Communications should be addressed to the Corresponding Secretary.

Manufacture of Bagging.—The Louisville Journal states that 14,000 tons of hemp were produced in Kentucky the past year. From this it required 8,500 tons to supply her factories, which manufactured 6,500,000 yards of bagging, and 7,000,000 lbs, of bale-rope; sufficient to rope and cover 1,100,000 bales of cotton. This leaves Kentucky 5,500 tons of hemp for exportation, which, if properly water-rotted and transported to this city, would bring $200 per ton.

Great Weight of Swine.—The same paper gives an account of rather an extraordinary gain in a lot of seven pigs in Union county, Kentucky. The oldest, when slaughtered, was 1 year, 23 days old, the youngest, only 11 months; and they had gained respectively, in 320 days, 467, 414 1-2, 415 1-2, 400 1-2, 405 1-2, 396, and 357 1-2 lbs. One of the pigs weighed 98 1-2 lbs. at 3 months old.

We understand that they were crosses of the Irish Grazier and Berkshire with the common hog of the country. We wish we could have seen added the quantity of food consumed by these pigs, its value on the farm, and the value of the pork it made.

Itch in Swine.—The Farmers' Journal states that this may be immediately cured by rubbing the animals affected with a mixture in equal parts of brimstone and lard.

Angora Pear.—Mr. Kenrick, in the Magazine of Horticulture, says that he has no doubt of the great weight of this pear in France as stated there, nearly five pounds. It is originally from the vicinity of Constantinople and is an excellent winter variety.

Bologna Hemp.—The Dollar Farmer informs us that this hemp is cultivated to considerable extent in Kentucky. It possesses the advantage of being more easily broken than common hemp, is of a white color, and finer, and stronger.

Manure from Shell-Fish.—A writer in the Boston Cultivator recommends muscles, which are to be found in large quantities on our coast, to be used as manure. He says some years' practise confirms him in their use as valuable fertilizers. No doubt of it. Clams, oysters, fish, or any marine production are equally valuable. The proper way for using is to throw in the heap in the fall, and cover with a light layer of peat or turf, so as to absorb the decaying fish, but not so thick as to prevent the action of frost. The whole mass will be found finely pulverized in spring, and can be mixed with compost, or spread like ashes. The shells afford lime, and the fish a valuable gelatinous substance of great efficiency in vegetation.

Increasing the Milk of Cows.—Gentle treatment and rapid and close milking, will tend to the greatest development of the milk in cows, and the contrary practises will have the effect of materially reducing the quantity.

Cure for Cut-Worm.—Mr. Newton of Pennsylvania says a mixture of one part of salt to four of plaster, applied on the hill, *not in contact with the corn*, will kill the cut-worm. The most effectual remedy, however, is to dig them up whenever their ravages are apparent, and kill them.

The Southern Cultivator gives another remedy Take of China berries, boil them until a strong decoction is made; pour one gill at the root of each plant, and the worm will leave immediately. I have tried the remedy many years. It has never failed.

Improvement in Early Vegetation.—It has been suggested that early gathered seed produce early maturity in successive crops; that potatoes, corn, and some other products will mature in successive years at the same time the seed was harvested, although they may not, when gathered, have been fully ripened. Can any of our readers confirm the proof of this principle?

To Remove the Flavor of Turneps, Wild Onions, and Leeks.—Put into a pail nearly full of new milk, one or two pints of boiling water.

New Variety of Wheat.—C. Kloss of Union, Pennsylvania, has raised a superior kind of wheat from "the blue stem." Last year 1,000 bushels were raised in that county, and although all other wheat was affected with rust and smut, this entirely escaped. It weighs 65 lbs. per bushel.

Directory for Shows and Fairs.—We shall give next month under this head, a complete Directory for all the Shows and Fairs to be held the ensuing year in the United States and Canada, and shall be obliged to our friends if they will forward us papers containing the time of meeting of the different societies. The Hampshire, Franklin, and Hampden Agricultural Society holds its meeting at Northampton, Massachusetts, on the 18th and 19th of October. The Philadelphia Agricultural Society will be held at Philadelphia on the 4th and 5th of October. These societies are to Massachusetts and Pennsylvania nearly what our State Show and Fair are to New York. The premiums are numerous and liberal, and the meetings will be particularly well worth attending.

☞ We are again compelled to defer several editorials which have been written out some time. We especially regret being obliged to do so of excursions made in New Jersey, on Staten Island, Long Island, up the Hudson, and in Connecticut. We shall commence these next month to a certainty.

☞ We can only say to any who have not received their paper, that the fault is not with this office. Our Nos. are carefully and promptly mailed as fast as issued. We however like to hear of all deficiencies, and will make them good.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

NEW VARIETIES OF WHEAT.

An intelligent, close, and accurate attention to the crops in the field, would enable our farmers to introduce many new and valuable varieties of grain into general use. It is a perfectly well-settled fact in botany, that many of the products which are the objects of careful cultivation on our farms, have been so much improved from their natural condition, as to bear but the slightest resemblance to the original. Our immense drum-head cabbage, and all the other varieties, have sprung from an inconsiderable weed, the colewort (*brassica oleracea*), hardly as large as one's hand; and the whole circle of varieties of our apples, from the tiny, yet delicate flyer and lady apple, to the golden pippin, and pound royal, derive their parentage from the sour, hard, diminutive crab, which is but little larger than a green persimmon, and almost as acrid.

Nearly all the articles we raise, have been improved from their natural condition in the quantity and quality of their growth, and many of them so much, as to bear but the slightest resemblance to their uncultivated ancestry. Indeed, some of the most common and necessary of our products have been so long under an artificial management, that we do not even know the source whence they have been derived. Among these, wheat is one of the most important. It has been the object of cultivation at least as far back as some of the earliest records of sacred and profane history extend, and as the specimens of our cultivated varieties are nowhere found in a wild state, it is obvious, that its original is among the hitherto undiscovered seeds of nature. Without intending to provoke, or under any circumstances, to be led into controversy on the subject, I would suggest that its true and ultimate original is *chess*. I have scarcely glanced at the chess controversy that has raged so furiously for some years past, and have no personal experience in the matter; but the fact, which rests on some of the most unexceptionable testimony, that *the same root has produced stalks both of wheat and chess;* nay further, *that the same stalk has produced heads of wheat and chess at the same time*, would seem to settle the matter, if further evidence were wanting, in addition to the mass of proof, that chess has, in numerous instances, been produced from wheat sown, when from its being thrown out by frost, or partially destroyed from other causes, its usual supply of nourishment has been withheld. That chess should produce chess, is a most natural conclusion if the above suggestion be admitted; for when once thrown back to its original, we must infer from every botanical principle, that years of the closest attention, and most careful cultivation, would be required to bring it back to its present perfect form and character.

But my only purpose at the present moment, is to urge the more general observance of what has long been practised by the most skilful agriculturists. Numerous instances are given of the production of new varieties by the accidental mixing of others, and the observing farmer will not fail to notice this new visiter in his fields, and carefully preserve, and thoroughly test its peculiar merits. The greater part of our best varieties of wheat have been accidentally produced, and the merit of their discoverers consists solely in their vigilant detection, careful culture, and general introduction. Several heads, or even a single head, has sometimes been discovered in a whole field, which, by its superior growth, fulness, weight, and perfection, has laid the foundation of the most valuable varieties. Thus we have the Hopetown, a valuable Scotch wheat, propagated by Mr. Sheriff; the Chevalier, first detected by the Rev. Mr. Chevalier, in a field of wheat, in England; the Wheatland red, first produced from other varieties by General Harmon of our state; and the Dyock oat, produced in Scotland. A similar attention on the part of farmers, may be instrumental in the introduction of numerous other kinds, equally, or even more valuable and productive.

In observing the character of new varieties, the closest attention should be given to every feature of the grain, and its superiority fairly and fully tested before adopting it as an acknowledged improvement. It must be such, as on particular soils, will, under all ordinary circumstances of general cultivation, for a long series of years, give the greatest value of products for the same expense of cultivation. And to do this, numerous characteristics are to be taken into consideration.

1st. The general hardiness of the plant, and its capability of resisting the besetting evils of this grain, the Hessian fly; throwing out by frost and winter-killing; rust or mildew; such, it is claimed, is the Mediterranean.

2d. A good, strong, upright stalk, with just enough of straw for the object, and no more.

3d. No beard is desirable; a head well filled and heavy; and retaining the grain as long after it is fit to cut as possible.

4th. A pre-disposition to tiller well.

5th. A plump, full berry, capable of yielding a large quantity of white flour, with a large proportion of gluten, and as little bran as possible. Such is not the Mediterranean, and of course, its advantages are to be weighed against its disadvantages, and every farmer is to decide according to his own circumstances whether he will cultivate it or not. On our finest wheat-lands, it would not be grown at all, while many may be compelled to take it or go without wheat altogether.

It is possible that skill and attention in mixing would produce some new kinds of great value. The necessity of occasionally introducing new varieties, is at once seen from the fact, that such as are the best adapted to any particular soil, climate, or position, are frequently giving out, and their place must be supplied with other kinds, or great loss, and perhaps a total destruction of the crops must ensue.

The importance of the improvement of our wheat crop, in an economical and national point of view, would, at a first glance, hardly be credited. Suppose, that by universal attention throughout the United States to the most obvious, simple, and generally acknowledged rules for its improvement, the total crop should be augmented 25 per cent. (and it could be increased nearly 50 per cent. with comparatively little additional expense), we should have an increase over the estimated crop of 1842, of more than 25,563,000 bushels. The advantages to result from the most intelligent and persevering attention to this crop, therefore, will commend itself at once to every reflecting mind.

R. L. Allen.

Buffalo, June 25th, 1843.

For the American Agriculturist.

COTSWOLD SHEEP.

Milton, May 29th, 1843.

I would call the attention of breeders of mutton-sheep, to those lately imported by Mr. Sotham of Albany, one of which figures in Vol. II. of the Agriculturist for April, and one also in the first Volume of the Transactions of the N. Y. Agricultural Society; the latter took the first prize at Syracuse. I had the good fortune, through the introduction of a friend to Mr. Sotham, to procure the service of two of the Cotswold bucks for the last two years, and such has been the decided improvement in our flock, that I can confidently recommend them to all breeders of heavy mutton-sheep, as being superior to any I have yet seen; if there are any better, glad should I be to see them.

That my judgment may not stand on bare assertion, I add, that the one we showed at the Fair in Dutchess county, took the first premium. In Ulster county, the first prize was also awarded to one by the judges, and was afterward given to another, he being excluded on the ground of his being *imported;* and that one was a year old, out of Mr. Dunn's buck bought of Mr. Sotham, pronounced by the judges the best they ever saw of his age; so that all the first prizes in Dutchess and Ulster were awarded the stock of Mr. Sotham.

The lambs got by these bucks are of great promise, some of them weighing over one hundred and fifty pounds at six months old.

E. Hallock.

CONVENTION OF BREEDERS.

(circular.)

Albany, June, 1843.

The State Agricultural Society of New York, desirous that some fixed principles should be established as the basis of excellence in the various descriptions of farm-stock (without reference to their *relative* merits as breeds), have appointed the undersigned a committee with instructions to call the particular attention of breeders throughout the States, to the importance of the subject, and to make the necessary arrangements for a Convention to be held at the Library Room of the American Institute, in the city of New York, during its 16th annual Fair, in the month of October next, the day to be hereafter noticed; at which breeders of stock and those interested in Agriculture, are most respectfully urged to give their attendance, with a view to a full and free discussion of those forms, qualities, and properties, which most conduce to intrinsic value; and also that the distinctive characteristics of each separate breed may be as closely defined as possible.

The society believe that the decision of such a meeting will offer to the agriculturist the best information that can, at present, be elicited; and which, they trust, may be so satisfactory to the mind of every intelligent breeder, as to lead to greater uniformity of action and opinion, and *possibly* become a standard with them, by which to judge and be judged, in all cases of competition.

With these views of the subject, the committee hope you may deem it of sufficient importance to be present at the proposed Convention, and lend to its discussion the aid of your experience and talents.

The committee will be obliged by any suggestions, in the interim, you may consider of sufficient importance to be communicated to them in relation to this subject.

Francis Rotch, C. N. Bement,
E. P. Prentice, George Vail,
Lewis F. Allen.

☞ Editors of the several Agricultural papers in the United States, are requested to publish or notice the above.

For the American Agriculturist

FAIR AT FAYETTE.

Ingleside, Miss., May 23d, 1843.

My Dear Sir: I have just returned from attending the Fair at Fayette. I reached there about 11 o'clock, A. M. There was a great crowd present of planters and their families, and by the time we reached the extensive and pleasant bower erected for the occasion, gayly bedecked with flowers, we found it filled to overflowing with ladies, and Mr. Montgomery in the act of delivering his address, which, from what I could hear at the distance, seemed spirited and interesting.

The display of flowers was good; but not by any means as extensive as was to be expected where so many young ladies were present, every one of whom should feel bound to appear with a large and well-arranged bouquet, of the best flowers she may be able to muster. Those bouquets I particularly noted, bore the cards of Mrs. Isaac R. Wade, Mrs. James J. Colyce, Miss Caroline Dunbar, and Miss Mabella Harrison. There were many others without cards, and baskets full, as I thought upon first sight, of fresh flowers, which, upon drawing near, I found were composed of worsted work. Only one of these was marked, that of Mrs. Charles Clark. On the same table were scattered beautiful specimens of net-work, lace, worsted work, &c., &c. A basket of cocoons and specimens of silk from Mrs. B. L. C. Wailes, juvenile socks by Miss Macgruder, and a substantial, comfortable-looking rag-carpet, by Mrs. Thompson B. Shaw. Mr. Robertson, who is about establishing a large factory of such goods near Fayette, showed some splendid specimens of blankets, flannel, cotton-girthing, jeans, and above all, a piece of strong and sufficient bagging, made from stained cotton, which is assuredly destined to drive every other article out of use. All the goods exhibited by

Mr. R. were spun by the negroes, and woven on a neighboring plantation. Economy, careful management, and everything made at home, is the order of the day among us here. One principal item is *cotton-bagging*. This, it is evidently our interest, in every way to encourage.

There was a fine show of vegetables—beets, peas, onions, turneps, potatoes, beans, cabbage, &c., &c. An excellent specimen of spring-wheat was offered by P. K. Montgomery, and received a premium. Mr. M. cultivates a considerable quantity. This is another item of saving that should be more generally attended to. I gathered three flour-barrels heaping full of clean upland rice, last year, from less than one eighth of an acre of land, and shall continue its cultivation. I shall be able, this fall, to supply any one with a couple of quarts or more for seed, who assures me that he is a subscriber to at least two agricultural papers; one of them being published in the state where he resides, if there is one published. "None other need apply!" Any other seeds, plants, or cuttings, that I may have to spare, will be distributed on the same conditions. Mr. Isaac Dunbar received a premium for samples of wine made on his plantation, of the vintages of 1841 and '42, which are assuredly the best specimens of domestic wine that I have met with. The exhibition of cattle, horses, hogs, and sheep, was pretty good. The working model of a cotton-press excited much attention. But I must refer you to the published reports, which I will send you, for further particulars. The dinner was an extensive affair, and—but, it was in *Jefferson county*, so I shall add no more. Ever yours,

Thomas Affleck.

For the American Agriculturist.

SPURREY FOR SANDY SOILS.

Buffalo, June 13, 1843.

This is a plant which is cultivated to a great extent in Denmark and Flanders, on the poorest sands. It is considered there as the most profitable crop that can be grown on very thin soil. Von Voght says: "It is better than red or white clover; the cows give more and better milk when fed on it, and it improves the land in an extraordinary degree. If the land is to lie several years in pasture, white clover must be sown with it. When sown in the middle of April, it is ripe for pasture by the end of May. If eaten off in June, the land is turned flat, and another crop is sown, which affords fine pasture in August and September. This operation is equivalent to a dressing of ten loads of manure per acre. The blessing of spurrey, *the clover of sandy lands*, is incredible when rightly employed."

It is used as hay as well as for pasture, and is eaten greedily by sheep. The seeds are rich and highly nutritious for all kinds of stock, and afford, when expressed, a valuable oil. We think our poorest sandy soils, such as are to be found on our Atlantic coast, which are not rich enough for clover, would be admirably adapted to this crop, and its introduction might be the means of affording a profitable rotation with rye, and eventually produce, with judicious management, an entire renovation of extensive tracts, of what is now almost entirely waste land. Schwartz, who is esteemed high authority in Germany, says, "without spurrey, the Campine (Kempenland, a district in Dutch Brabant), "*the best cultivated soil in the world*, would still have been a desert. It requires no manure for itself, and even when mown, by the residue it leaves, it gives back more than it takes from the soil; and except for the seed, it requires no preparation, and it will grow where no other crop, excepting rye, will live." Will some of our enterprising and intelligent farmers, having land adapted to this crop, give the experiment a thorough trial?

R. L. A.

From the Brit. Amer. Cultivator.

BERKSHIRE HOGS.

Mr. H. M. Wakeman of the village of Yorkville, one mile north of this city, slaughtered in the month of December last, two full-bred Berkshire pigs, aged 7 months and 5 days—the one weighed 205lbs., and the other 225lbs. net weight. They were purchased from Mr. Severn, Brewer, of Yorkville—who is well known to many of our readers, as a successful breeder of this our favorite breed of swine—when ten weeks old, and required no extraordinary care or feed, to fatten.

A writer in the *Farmer's Gazette*, Connecticut, in eulogizing the English breeder, says, they have given the Berkshire swine size, greater than an alderman or lord-mayor of London; fine formed, symmetrical limbs; fine, thin, glossy hair; soft, *lady-like skins*, and great hardiness of constitution—made them prolific breeders, best of nurses, of thrifty growth, early maturity, easily kept on grass, and will fatten at any age. Their dispositions, quiet, and powers of endurance great; and their meat is of the best kind, lean where they should be, and fat where you want it; hams and shoulders lean, and delicate, and broad sides, the best of mess.

From our knowledge of Berkshire swine, we feel no hesitancy in bearing out the above writer in his remarks, and would recommend every farmer to *engraft* either the Berkshire, improved Durham, Yorkshire, or some of the breeds that are celebrated for their propensity to fatten at an early age, on their breeds. A single cross will satisfy them that the difference of breed does not consist merely in the difference of keep. The day is not far distant when fattening pork for the British market will be found a profitable business for the Canadian agriculturist. The success of which, however, will much depend upon the skill practised in feeding and curing. As a public journalist, we will not lose sight in giving such information on these two important points, as will enable the Canadian agriculturists to compete in a very few years, with the very celebrated Dutch and Irish pork curers. In the meantime, we beg to suggest to those who intend to engage largely in the business, the propriety of selecting a breed of swine as above, without delay. The most valuable hams and bacon that are sold in the British market, are made from pork from eight to ten months old, averaging in weight from 160 lbs. to 220 lbs. each.

By adopting this system, a great advantage will be gained over the old plan, both in feed and trouble, as no store hogs need be kept during winter, unless it be breed sows, which should be managed so that they would drop their pigs during the month of March or the first of April.

For the American Agriculturist.

REMEDY FOR BUGS AND WORMS ON THE GRAPE-VINE.

Mississippi City, 18th June, 1843.

Dear Sir: My grapes are now nearly full-grown, and have had no rain since they were in bloom. A friend of mine this spring, said I was an enthusiast about the cultivation of the grape in this country; that they would not succeed, &c.; that he had tried them, and found a small bug or louse would get on the leaves and kill them, and cause the grapes to drop off. This made me more vigilant, and on the 10th May, I discovered the bug he spoke of in great numbers on the young leaves and ends of the branches. I immediately commenced pruning off all the young branches they were on, leaving one joint above the last bunch of grapes, and fed the milk cows on the young branches and leaves. The cows improved very much on this grape-vine fodder, and in a few days no more bugs made their appearance; and I found both them and the grapes had been benefited by the operation.

Again on the 1st June, a small, yellow worm, with black marks across it, made its appearance in considerable numbers on the grape-leaves. I once more commenced pulling off all the leaves they were on, and soon got clear of them, still further benefiting the grapes and cattle. They are all no doubt the larva of some fly or bug that lasts but a short time, and appear to me to be sent as overseers or guardians, to admonish us of the necessity of pruning our vines and feeding our cattle. However, be this as it may, our grapes are now nearly full-grown, the crop heavy, and every appearance that they will do as well as I could desire.

Egyptian Wheat.—A neighbor of mine has tried the Egyptian wheat, and finds it succeeds well here. I am trying the buckwheat, and feel satisfied it will do sufficiently well, to at least make a valuable manure for our poor land.

Tussac and Peruvian Grass.—We are all anxiety here to get the Tussac grass, so highly spoken of by Captain Ross in his visit to the Falkland islands. Can you give us information how or where it is to be had? I am now trying the Peruvian grass; a part of it has lived through the drought, as well as a little lucerne. There are many experiments now being made in this vicinity, which I hope will prove of great utility to us all in this section of country, and not entirely useless to the subject of agriculture in general. I do not know a man in this country, who is not doing more in the way of agriculture this year than ever before; and although our beginnings are small, these may, by persevering industry, guaranty us important results.

The first numbers of your second volume, give assurance of all you promised, and every person I have heard speak of it, is highly pleased with the work. We have a very valuable paper published in our own state now, the Southwestern Farmer, which I feel a sort of state pride in supporting; but we need all the information you can both give us, and I hope to see you and all those engaged in the laudable pursuit of dispensing useful truths well patronised. J. J. McCaughan.

For the American Agriculturist

BOMMER'S MANURE.

New York, June 12th, 1843.

Dear Sir: I herewith send you a report of a committee of farmers, on an experiment of my process of manufacturing manure, recently made at Flatlands, and if you think it worthy, I should be pleased to see it inserted in your paper.

George Bommer.

A committee consisting of the following gentlemen, Elias Hubbard, Esq., of Flatlands, Ferdinand L. Wyckoff, of New Lotts, Michael Stryker, of Flatbush, Henry S. Ditmas, of Flatbush, Johannes Lott, jr., of Flatlands, appointed from a large company of farmers, assembled to examine Mr. George Bommer's method for making vegetable manure by fermentation, on the premises of Garret Kowenhoven, Esq., of Flatlands, in this county, respectfully Report—

That after careful examination of a heap laid up on the 19th of April, and opened this afternoon (May 3, 1843), they most cheerfully acknowledge that the change produced upon the materials used, far exceeded their most sanguine expectations; said materials, consisting of straw and salt hay, presented, when opened, the appearance and smell of rich manure.

Said committee further report that they also examined the book containing Mr. B's. method, and are fully persuaded that the various ingredients used, are all, in themselves, beneficial, and in their combination must produce the most favorable results. The committee most cordially commend the above method to the serious consideration of the farmers of Long Island.

By order of the Committee.

Elias Hubbard, Chairman.

Flatlands, May 3, 1843.

As our correspondent has modestly omitted saying anything of the fine points of his beautiful South-Down ewe (Fig. 32), we shall take the liberty of doing it for him. They may be briefly enumerated as follows:—

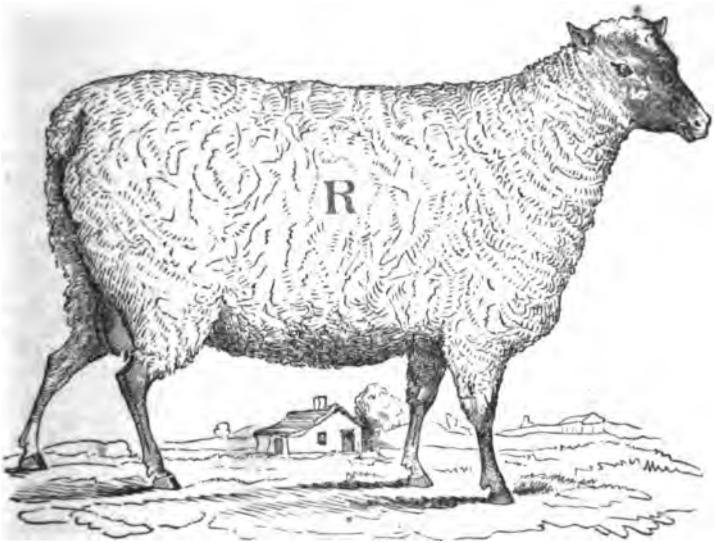
A fine, clean head; eye bright, with the orbit not too prominent; short neck; straight back; ribs springing high and bowing; wide loin; tail set on well up; long from hip to rump; very deep in the flank; full twist; round, projecting brisket; fore legs standing perpendicularly under the body; sound hoofs, and well woolled on the belly and thighs.

We are also indebted to the same source for a spirited sketch of a native sheep (Fig. 33), with the points all lettered. On these we shall make

no additional comment, as they *eloquently* speak for themselves. The reader has now a comparison set before him, and can choose according to his fancy. If he wishes a good, profitable sheep, the wool of which is abundant, and sufficiently fine for family use; the whole carcass the best of mutton; the hams *lean, tender, juicy, and particularly heavy,* and well adapted for curing like venison (to which it is scarcely inferior), to be exported in large quantities at a handsome profit to Europe, he can take the South-Downs. On the other hand, if he prefer a miserable, ill-bred, rambling, coarse, loose-woolled sheep, which will never pay a summering, much less a wintering, let him adhere to the native.

We believe it is pretty well known, that Mr. Rotch has repeatedly imported the choicest South-Downs, from the very best flocks in England, the last of which, we selected for him nearly two years since, from the celebrated blood of Mr. Webb at Babraham, and brought over with us on our return to America. All of these he is breeding with great care, and for a more particular account of these splendid sheep, we must refer our readers to the article "Tour in England, No. 4," Vol. I., page 103, of the American Agriculturist.

SOUTH-DOWN EWE, LITTLE WOOD-CHUCK.—(FIG. 32.)



For the American Agriculturist.

SOUTH-DOWN SHEEP.

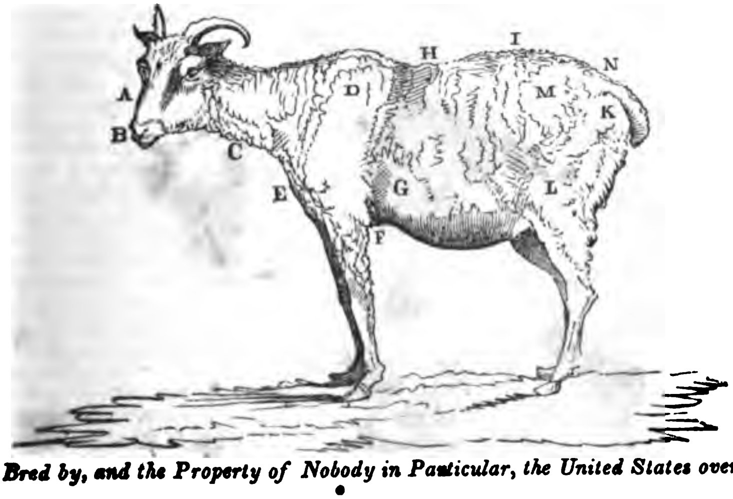
I HEREWITH send you a drawing of a snug, heavy, little South-Down ewe, known on the farm by the soubriquet of the Little Woodchuck. I have in hand a drawing of a buck of exactly her stamp, both a mite too short, but all solidity and weight. He is by Ellman's best buck, and was sent me from England in a very fine ewe.

F. R.

Butternuts,
23d May, 1843.

Bred by, and the Property of Francis Rotch, Esq., Butternuts, Otsego Co., N. Y.

NATIVE EWE, WILD AND WORTHLESS.—(FIG. 33.)



A—Face.
B—Nose.
C—Neck.
D—Shoulder.
E—Bosom.
F—Brisket.
G—Fore flank.
H—Chine.
I—Loin, or saddle.
K—Rump.
L—Leg.
M—Hips.
N—Crease, or crack. This is a channel along the sacral bone just at the setting on of the tail.

Bred by, and the Property of Nobody in Particular, the United States over.

We quite agree with the respected writer of what follows, that we have little hope to learn anything valuable abroad upon the culture of hemp. Returning to the United States after a residence of nearly two years in Russia, we inspected the hemp plantations of the west, and became convinced that Kentucky was in advance of any part of Europe in its cultivation, though not in the preparation for market, as is evident by its selling for all sorts of prices here, from $60 to $190 per ton, while the Russia brings $200 to $210 per ton. We have not a doubt but that hemp can be as well prepared at the west for market as in Europe, and our countrymen owe it to themselves to see well to this matter. They may then become large exporters, and derive great wealth from its culture. By reference to remarks on our price current last month, it will be seen that Mr. Clay's hemp sold for $190 per ton in Philadelphia, and was considered equal to the best European article. Our cotton-planters would think it very odd to be beaten in their market by the poor, ignorant natives of India; why then should a hemp-planter yield in skill to the serfs of Russia? We hope it will not be so much longer.

For the American Agriculturist.

CULTURE OF HEMP.

Prospect Hill, Ky., June 5th, 1843.

If any improvement in raising hemp-seed should be made, (and I will take some pains to inquire of our best hemp-growers) I will communicate with you on the subject, after our fall crops are secured. I was amused in reading, recently, a document on the Russian mode of cultivating and water-rotting hemp, furnished from the navy department. It shows, I think, that we have little reason to hope for any useful information from that quarter (Russia) as to the culture of hemp. Take for instance the following: "Hemp planted for seed" when ripe, "should be *pulled* up by the roots, and be placed under a *roof* or in the shade, in an upright position."

"After the seed has been thrashed out, the *branching stems* may be exposed to air and moisture, by spreading them on the ground, for *dew-rotting*."

"To produce a good crop of fibrous hemp, it should be sown *in drills*." If sown by hand "*two bushels* of seed should be used to the acre."

"To obtain clean, strong, and fine hemp, it is of great importance that the male plants should be separated from the others, at a proper time. The only method by which this can be done is to *pull up by the roots*, at the proper time, every male plant. The time for *pulling* the seed or female hemp will occur *several weeks after the male hemp has been disposed of as above. Pulling up by the roots* is much to be preferred to cutting with any instrument. The *crowns* of the plants, thus gathered, should be laid together without regard to the equal lengths of the stems, but in gathering a handful, or bundle of hemp, *those of equal length* should be selected as far as practicable."

But enough of this nonsense. If I were to pursue the Russian method of cultivating hemp as explained in the article referred to, I am quite sure I could not manage one acre as easily as I manage five, according to our Kentucky plan. Besides, if we were to attempt to traverse our thickly-sown hemp to *pull* up the blossom hemp (about one half, instead of one eighth, as stated in the article above referred to), and to carry it out from among the seed hemp, the latter would be nearly all trodden under foot.

Very truly and sincerely your friend,

A. Beatty.

For the American Agriculturist

MANAGEMENT OF THE DAIRY.

'Ill huswife, unskilful, to make her own cheese,
Through trusting of others hath this for her fees;
Her milk-pan and cream-pot, so slabbered and sost,
That butter is wanting, and cheese is half lost."

Tusser.

Old Tusser knew well the art of dairying. Intelligence, care, and neatness in managing, are the great requisites he inculcates, and without each of these, it is impossible to succeed in producing good butter and cheese. Another remedy for a deficiency of either, he properly enough advises be applied to the dairy-maid,

"If cheese abide tugging, tug Cisley a crash,
And if baies don't mend Cisley, then shift her aside."

After providing a dairy-maid of the proper standard, which, in all cases, ought to be found in the farmer's *better-half*, the farmer must provide a good stock of cows, and see that they be well attended to. They must give *good milk*. There is almost as much difference in the milk of cows, as there is in wheat and chess. They must also be well fed. Rich food, and abundance of it, makes rich milk and in large quantities. The cows must have plenty of clean water; and *they must at all times be well salted*. They should be managed kindly, and milked quickly to induce them to yield all the milk; and the stripping should be all drawn, as the milk rapidly improves in quality toward the last.

When strained for butter, the milk may be placed in tin-pans or stone-jars, of any convenient depth. It is a mistaken notion that more cream will rise from a given quantity of milk in a shallow, than in a deep vessel. In many dairies, scalding the milk is practised. This produces a larger quantity of butter, and when fresh, is well flavored; but it soon becomes rancid. The cream should be kept in a clean, cool, well-ventilated place; a cellar or well-shaded, stone dairy-house, over a running stream, is best in summer. In this, the churning should also be done, and the butter kept.

Some churn all the milk. This gives a greater quantity of butter, but is attended with much more labor in churning. When, however, it is done by a little stream of water, or by goat, sheep, or dog power, it is of small consideration. Cold water should be added to the cream in warm weather and warm water in winter, so as to bring the temperature of the cream to between 50 and 55 degrees at the commencement, and the process of churning will carry it to 60 degrees, or upward. Extensive experiments in Scotland have shown that the greatest quantity of butter has been produced at 60 degrees, and the best quality at 55 degrees. Mr. Aiton describes the process common in the dairy districts of that country, which is to place the milk when first drawn in coolers for 6 or 12 hours. When entirely cool, it is then put into a large tub a second or third milking may be added, till the whole is loppered. It is then ready for churning, but if the lopper is not broken which causes it to ferment, it may remain several days. The churning is commenced at 50 to 55 degrees, but it must attain 70 degrees before the butter can be separated.

When collected, the butter must be thoroughly cleansed of every particle of buttermilk. This can only be done by working it, either with or without cold water. A ladle ought always to be used for this purpose, the hand never. Nothing should be then added to it but *fine salt.* Vast quantities of butter are yearly made in the United States, which are used for no other purpose but soap-grease, from the total want of all care in preparing it. Five things are required in producing butter to keep for a distant market. *All the buttermilk must be worked out; pure, fine salt used; and during this process and afterward, the butter should be kept cool; the vessels in which it is packed must be sweet; and they should be closed from the air.* When filling a vessel with butter from successive churnings, brine may be placed over the top to exclude all the air, or a clean cloth used, saturated with salt.

Cheese can only be made to advantage when the cows have a free range in a summer pasture. Unless their food contains a great deal of nitrogen, which it seldom does, exercise is absolutely essential to develop the casein, which is the peculiar principle of cheese. All the care and neatness enjoined above for making butter, are equally required for making cheese. One or more milkings, if sweet, may be made into a cheese. No cream should be taken from the milk. When enough milk is obtained, heat it to its natural temperature, and add rennet sufficient to produce coagulation in 30 or 40 minutes. For this purpose a piece two inches square, and soaked in a pint of water for 12 hours is generally sufficient for a cheese of 20 lbs. The curd is then broken into fine pieces, and all the whey run off, when, after being drained, it is placed in the hoop, and under the press. After 10 or 12 hours, the cheese should be rubbed with fine salt and replaced in the press, where it may remain 48 hours. If the whey is set in pans, it will produce cream which may be churned into butter for greasing the cheese. The cheese should be turned daily at first, and occasionally afterward till it is cured. It should be always kept in a cool, dry place, and when ready for market is best preserved by packing in a cask with clean, dry oats.

Use no coloring for cheese. Annatto, which is generally supposed to be used for this purpose, is a good vegetable medicine enough for dysentery and some other disorders. But the trash sold for Annatto, and such as is used for coloring cheese, is the vilest compound ever presented for human food; consisting of old powdered bricks, starch, turmeric powder, train oil, potash, soft soap, quicklime, chalk, pipe-clay, and sometimes a little of the genuine article added. Even if pure, it would not improve the cheese; and filthy as these ingredients are, they injure it just in the proportion in which they are used.

An agricultural committee in Jefferson county N. Y., examined 27 cheese, and 10 butter dairies, comprising 829 cows, in the fall of 1842, and they report that the cows make on an average 318 lbs. of cheese each, beside 40 to 50 lbs. of butter in the fall and spring. The cheese averaged 2 lbs. 2 1-2 oz., and the butter dairies 13 1-2 oz. per day. The cheese at 5 1-2 cents per lb. will exceed the value of the butter at 12 1-2 cents per lb., 1 3-8 cents per day. The comparative value of the offal for pork-making, and the labor in preparing each, must then determine which is the most profitable article for market.

R. L. A.

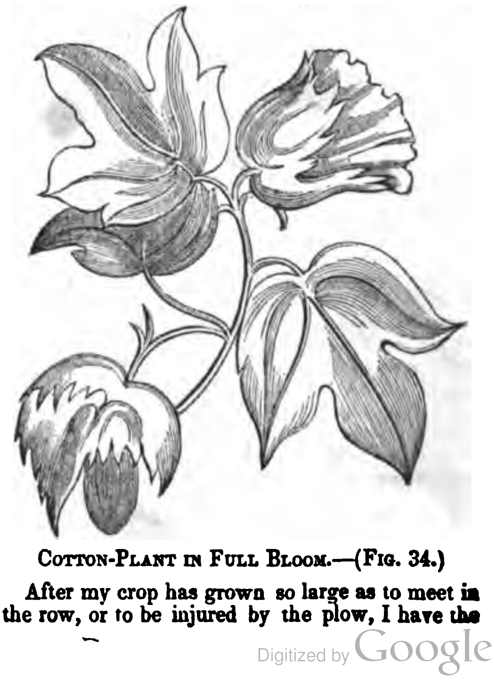
Buffalo, May 15th, 1843.

For the American Agriculturist.

CULTIVATION OF COTTON.—No. IV.

Log Hall, Miss., July, 1843.

In my last I gave you as minutely and as distinctly as I was able, the mode I pursue in the working of the crop; which is pretty much the same followed by some others, I would not say generally, because I know very little how many of my neighbors get along, finding enough to do at home to keep matters and things a-going. But I believe this plan is pretty much the same as is generally pursued.

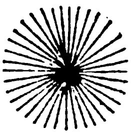


Cotton-Plant in Full Bloom.—(Fig. 34.)

After my crop has grown so large as to meet in the row, or to be injured by the plow, I have the grass chopped out with the hoe, especially if there has been rain, for then, there springs up a grass, called by the opposite names of sour or saltpetre grass; not that I fear any injury to the crop, only as furnishing more trash to get into the cotton when gathering, or keeping the earth wet in the mornings by dews. I forthwith prepare for gathering cotton any leisure time (as our saving-fodder time is now at hand), such as making baskets, sacks, cleaning up gin-house, &c., &c.

In all this country each hand has a cotton sack and cotton basket for picking; the first made out of stout, yard-wide Lowell goods, by cutting off one and a third to one and a half yards, doubling and sewing one side and end. On the open end attach a strip of cotton doubled, long enough, when over the shoulder, to keep the sack off the ground when standing erect, this is sewed on each side so as when the right arm and head are passed through, similar to the belt of the bayonet or broad-sword, the weight rests on the left shoulder, and the sack against the right hip. When picking, the cotton is placed in this sack until full, which will weigh from 15 to 20 pounds, and then emptied into the hamper or basket, placed in a central point of the day's picking. This is made of young white oak, some 3 to 5 or 6 inches in diameter, growing in low ground, by cutting off a piece about seven feet long, quartering, and then splitting into *splits* about three quarters to an inch wide, and as thick as a case-knife blade, and ribs somewhat thicker. Take according to size of basket wanted, some 15 to 22 or 23 of these ribs, and lay them on the ground crossing each other thus, and commence weaving in the splits as near to the central point as possible, by fastening to the bottom rib first, running over and under until all round; insert an odd rib, for 15 or 20 will give an even number of ribs, each long one making in fact two, and if an even number, the splits will round all alike; but by having an odd one, the rib that was outside comes next inside, &c. After the bottom is filled up the size wanted, double the ribs over on the bottom, press on them with the foot all round until they will assume, more or less, an erect position, then continue around until the proper height. Now double down the rib so as to enclose the last split, and run the end down into splits, so as to make fast. Get out now two pieces of the white oak, about one third of an inch thick, take off the corners with a drawing-knife, put one on the inside, the other outside of the last split around the top of the basket, and wrap it well with thin, narrow splits, over and under the last split. This basket should do for two seasons, the bottom of my largest is about 27 inches across, and about two feet high, will hold about 150 pounds of cotton, or three bushels of shelled corn in the ear.

(Fig. 35.)



The next thing is cotton-scaffolds for sunning the cotton. I only use the shed attached to my gin-house, 62 feet long, and 12 wide. The best made use of by our neatest planters, are made of plank, attached with hinges (like a folding leaf table reversed), and resting on a frame-work, so that at at night, or a rain threatening the leaves can be folded up, and shelter the cotton. The first of these was described to me 10 years ago by the late Mr. William Bacon, who was at that time the most systematic cotton-planter I knew—a Northerner. Other kinds of scaffolds are made by cutting cane about five to six feet long, and weaving together with linn-bark, of a tree called here linn or wahoo, and laid crosswise on stakes and poles. Others split out boards.

The gin-house now undergoes a rigid examination. The gin-stand should be sent off to the gin-wright, if necessary; the band be put in order, which should have been well greased, and hung up out of the way in the winter; the running gear trained, plummed, and leveled; and the house again thoroughly cleaned out, as it is presumed it was done, when the last season's ginning was done. I use a 60-saw gin-stand; a light draught for four mules, the running gear being Philadelphia castings for a 12-foot wheel, fastened to a wooden wheel by bolts and nuts. I could give you a minute description of number of cogs in wheel, and in spur or trundle-head, size of band-wheel, and speed of the saws; but as I purpose to make an examination into this matter the ensuing month among my intelligent brethren in the southwest part of this state, I will postpone and communicate to you hereafter in the east.

To make fine cotton, there is certainly much depending on the gin-stand, the speed, &c., in aid of which there are a variety of improvements, as the flue, false grates, and a thrasher, though of these hereafter; for the present I think the flue will entirely supersede all others. As I think of concluding with my last article, and have yet only given you two pages, I will offer some views I have on the handling of cotton, though their correctness is questioned by many; yet as account sales are "stubborn things," I may be allowed to hold on, until there is a demonstration to the contrary.

Cotton should be gathered from the field as clean as possible, taken to the scaffolds and dried until the seed will crack when pressed between the teeth, not crush or mash, but crack, with some noise. It should be frequently turned over and stirred (all the trash and rotten pods taken out while this is being done), so as to insure its drying earlier.

If seeds are wanted for planting, gin the cotton immediately, and spread the seed over the floor some five inches thick, until perfectly dry. If the cotton-seed be not wanted, pack the seed-cotton away into the house, to remain until a gentle heat is discovered, or until sufficient for ginning; after it has heated until a feeling of warmth to the hand, and it looks as if pressed together, open out and scatter to cool. This cotton will gin faster, have a softer feel, is not so brittle, therefore not so liable to break by rapidity of gin, and has a creamy color; the wool has imbibed a part of the oil that has exuded by the warmth of seed, and is in fact restored to the original color; for the oil being vegetable, it is dissipated by sun and air, and the color by moisture (of rain and dews) and light. I have known of a number of sales made of this description of cotton, and even those who are most strenuous against the heating, admit it bore a better price.

No one supposes if cotton be put up wet, dirty, trashy, with rotten pods, that it is benefited; but whoever thinks of such a thing, unless it be one who loves the argumentum ad hominum?

What little knowledge I have in farming, has been acquired by years of close attention, reading, and reflection. I do not think I know everything; far, very far from it; I know enough, however, to know I have much to learn; I therefore ask of others to correct me, if wrong, being anxious myself to improve, and aid others in improvements. I ask them yet farther, to examine, reflect, try; if wrong, discard; if right, adopt; and return the benefit by throwing in each one his mite to the farming knowledge of the country.

M. W. Philips.

We should be glad to be informed by any of our southern friends, whether they have adopted the method of planting the top part of the cane only, as detailed by Mr. Brown in his present letter on Cuba. On those plantations which we visited last year in Louisiana, we found that the whole length of the stalk of cane was planted, and that it lasted only three years, at which time a new planting became necessary. Now in Cuba it seems the plantings last twenty years or more. Is this owing to a difference of climate in its favor, or is it to be attributed entirely to the different method of planting? We found the Otaheitan, as well as two other varieties of cane under cultivation on the Mississippi.

For the American Agriculturist.

THE AGRICULTURE OF CUBA.—No. II.

Ingenio Atalaya, May 17, 1843.

Dear Sir: The plantation I date this letter from contains about 2,000 acres, 400 of which are appropriated to the culture of the sugar-cane, 50 acres to plantains, 20 acres to yucca and maize, and about 300 acres to fruit-trees and vegetables. The other part of the estate consists of pastures and woodlands. It is stocked with about 600 working oxen and neat cattle, 300 cows, 40 horses, and 100 negroes adapted to field labor. The whole product, in a fruitful year, is about 1,300 hogsheads of molasses, or a corresponding amount of sugar, which will usually sell in the United States for $35,000.

This plantation is laid out in a very complete manner, which I will briefly describe. Near the centre of the cultivated grounds there is a beautiful hill elevated about eighty feet above, and situated about half a mile from tide-water. On the top of this hill, close by the sugar-works, is the mansion of the proprietor, tastefully ornamented with piazzas, and surrounded by gardens, groves of plantain, orange, and other trees. The natural declivity of the ground on which the sugar-house is situated, is sufficient for the expressed juices and sirups to flow, without assistance, from one part of the works to the other, a desideratum that should always be sought after in erecting works of this kind. The whole estate is laid out with avenues radiating from the dwelling-house, which enable the family of the proprietor to overlook the whole plantation, and all the operations of the field.

The soil of this estate and vicinity, consists of a dark-colored mould of several varieties, with a clayey or limestone substratum, and although its surface quickly dries after a fall of rain, its under portions retain a considerable degree of moisture, even in time of drought, and seldom requires trenches for draining in the wettest season.

The cane usually cultivated on this part of the island is the Otaheitan variety. It is propagated by cuttings of about a foot and a half in length, inserted in the ground in an upright position just before the commencement of the rainy seasons. These cuttings usually comprehend the top part, deprived of their leaves, and two or three of the upper joints of the canes. They are usually planted about eight inches apart, in trenches from thirty to thirty-three inches asunder, and from ten to twelve inches in depth. Sometimes, however, the cuttings are laid longitudinally in the trenches, and covered with earth to the depth of about three inches, which places the plants in a favorable state for deriving the utmost advantages from the ensuing rains. In two or three weeks after planting, the young sprouts shoot up a few inches above the surface, which are carefully hoed and kept clear from weeds for about four or five months. The off-shoots which spring up from the suckers are taken off, as they imbibe nutriment from the parent plant, and seldom arrive at maturity themselves.

The time for cutting varies with the soil and the season. The whole plantation is cut every year, and usually occupies the period from December to the September following. When the cuticle of the canes become dry, smooth, and brittle, their piths grayish approaching to brown, the juice sweet and glutinous, and when cut crosswise with a sharp knife, without appearing soft and moist like a turnep, then they are considered in perfection, and in a fit state to cut.

As soon as the canes are cut, if the rainy season be near at hand, all the rubbish of the field, such as weeds, decayed leaves, &c., are laid about the roots of the plants, the earth being well loosened with a hoe, and cleared of weeds, but little other labor is required until the canes are fit for cutting.

Instead of the excessive labor of planting anew every year or two, as in the southern part of the United States, with careful management, the stools or roots of the canes here, are allowed to continue in the ground for years without replanting. On this estate, where I have passed several months, there are fields of cane which were planted twenty-two years ago, and have been cut every year since, yielding each year a good crop.

This process of reproduction consists in the development of the buds which form the secondary stool of a plant which has been cut, and are called *retoños*. They are designated by first, second, third, &c., according to the age of the root from which they spring. They annually diminish in length of joint and in their size; the first being larger than the second, the second larger than the third, and so on in a deteriorating progression. When, however, they arrive at maturity, receiving the benefit of air, and the light and heat of the sun, they yield a much richer juice, and produce a better quality of sugar. Their juice is much easier clarified, and less care is required in its concentration, than in the canes otherwise cultivated. Hence, by this method, the produce of sugar from the same quantity of ground, if not equal to that from canes raised the other way in soils more recently worked, perhaps yields, in a long run, quite as much profit to the planter, provided the comparative expense of labor attending both modes be taken into account.

The sugar-cane here is perhaps less liable to accidents than in any other part of the West Indies. With the exception of fire, which sometimes consumes whole cane-fields as though they were composed of gunpowder, there are not many calamities that befall it. There are but few insects which feed upon it to any extent, and this is of rare occurrence. Formerly much evil was experienced by the depredations from rats, but this has been obviated by introducing into the fields domestic cats which have run wild, and have propagated their species to an extent sufficient to destroy these depredators.

In your next number I propose to resume this subject, and give an account of the modes of manufacturing sugar as practised here.

D. J. Browne.

For the American Agriculturist.

RUST IN COTTON.

Ingleside, Miss., June 26th, 1843.

After giving a gloomy account of the prospects of the rice, cotton, and corn crops, on the bottoms of the Mississippi, and many of its branches, owing to the long-protracted, deluging rains, Mr. Affleck proceeds to say:

In addition to the foulness of our crops, and the utter impossibility of cleaning them—and the fact that even on hill lands the cotton is growing much too rapidly, throwing out long, overgrown branches, with scarce a *form* (blossom-bud) to be seen—it is becoming, in many fields, seriously injured by *rust.*

This rust is a disease for which the *causes* assigned, and *cures* proposed, are various enough. It shows itself everywhere, more or less, in wet weather; but even then is worse on bottom lands. At other times, as far as my observation and information go, it appears only on that land that has been cropped for a long succession of years, in cotton, without change, rest, or manure. In new land, it rarely does any harm, unless it be low and wet—a wet soil and a moist atmosphere being what the cotton plant loves not.

What is called *rust* here—and I think is correctly so called—has its origin in the stem and branches, though it first shows itself in the leaves. These become covered all over with *splotches* of brown or russet, and soon dry up, so as to almost crumble at the touch. The branches and stem then show the same appearance. But if, on the leaves first becoming spotted, the stem be broken, it will be found diseased at the heart or pith, from the ground up. The plant dwindles, shrinks, and dies, without perfecting a *bowl.*

The *causes* assigned to this disease, and the *cures* proposed, are—too much moisture, and draining recommended as a cure; iron in the soil, and the application of lime advised; some ascribe it to deep, and others to too shallow plowing; and some again to a superabundance of vegetable matter in the soil, and others to a lack of it. For my part, I had almost come to the conclusion that it was occasioned by some minute insect, which was aided in its operations by dark rainy weather, forcing the plant into a too vigorous, dropsical growth, during which the epidermis (outer bark) becomes thickened and softened, by which the insect is enabled to make more rapid progress in its injuries. Land that has been injured and exhausted by successive crops of any one plant, can not possibly sustain that plant in a healthy state, during the extreme vigor imparted to it by unusual growing weather; this being the case, it yields much more quickly to injury of any kind.

My opinion of an *insect* being the direct cause of the *rust* in cotton (and, by the way, under almost every leaf affected by it, will be found numbers of a minute species of aphis), has been much shaken, if not changed, by perusing an address by Dr. Leitner, published in the 8th volume of the Southern Agriculturist. There, Dr. L. states distinctly, that this disease "is occasioned by the *uredo gossypii*, a minute parasitic fungus, which I think arises originally from the deteriorated state of the soil, not furnishing the necessary and wholesome food for the plants. The functions of nutrition, secretion, and excretion, are of course disturbed, the vessels become gradually obstructed, and the tissue disorganized, which, when assisted by great moisture in the atmosphere, is often followed by a development of this fungus." The writer then goes on to explain how the fungus shows itself, and causes the injury; and how it is produced and increased by careless and exhausting cultivation; that "agricultural observations seem to show, that only wornout lands produce this disease, whereas the new land remains generally free from it; that open land that has been covered with saplings, briars, and a luxuriant growth of broom-grass, and other weeds, is most calculated to induce this evil, and that it is most prevalent in wet seasons. If you admit these views of the disease to be correct, it becomes evident that its prevention can only be effected by the improvement of our soils, the burning down of the crop as soon as rust is observed, and a rotation of crops. The latter, I think, will be found the most effectual remedy, as it is an established fact, that most of the parasitic mushrooms, though met with indifferently upon almost all the species of their respective natural orders, can not extend their ravages beyond that order."

Let the *cause* which produces rust be what it will, I have not a doubt but that the true *cure* is here pointed out. I am the more confirmed in this belief, from some observations I made last year; such as, that one field which I put in cotton, last season, had been in corn, so far as I could learn, every year, for eight or ten years previous. To follow up this with such a crop as cotton, you will call rather *a queer improving rotation!* But so it was- -even this change was of great advantage, as was proved by its being entirely exempt from rust, and affording a fine yield of cotton; while in that part of the *cotton field* proper (for you must know that few of us are troubled with a greater subdivision of our plantations, than a truck patch, a cow pen, a cotton and a corn field!) where cotton alone had been grown for many years, much of the crop was injured by rust, the oldest and the wettest land suffering most.

Lime being death to fungus plants, I should suppose the application of it, in this instance, would be very beneficial. I will try it. In fact, I shall persevere until I discover the cause of *rust*, as also of *rot*.

The crops of corn wear a most luxuriant and promising appearance. I only hope that we may have dry weather enough soon, to allow of the impregnation of the ears: if it continues much longer to rain so steadily, the pollen will be washed from the tassel, without its being able to effect the object intended by nature. More grain of every kind, and especially corn, has been planted this year, than ever was put in before.

THOMAS AFFLECK.

DURHAM BULL LOCOMOTIVE.

WE have received a letter from Mr. J. E. Letton, of Bourbon county, Kentucky, stating the superiority of his bull Locomotive, imported from the herd of Mr. Bates of Kirkleavington, England, in 1841. From this we make the following extract:—

"As to Locomotive and his calves, I have won the prize wherever I have showed them. His stock look fine, and handle superior to anything I ever saw west of the sea."

For the American Agriculturist.

ESPY'S PATENT CONICAL VENTILATORS.

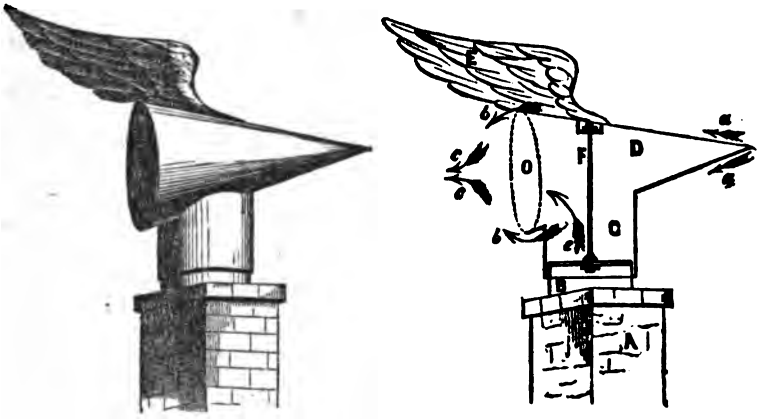
THIS cheap, simple, and efficient apparatus is adapted to all purposes of ventilation.

Basements and cellars, churches, court-rooms, steamboat cabins, school-rooms, hospitals, prisons, stables, vaults, dairies, &c., may, by its application, be rendered free from dampness and foul air: it is also an effectual *cure for smoky chimneys.*

Deleterious gases, emitted by fires in fire-places attached to bad drawing chimneys, together with the chilly, damp atmosphere of most basements, even during dry, warm, summer weather, are the cause of much human suffering; especially in crowded cities. The gases in question, not unfrequently produce vertigo, nausea, &c., while the chilly dampness of basements, by suddenly checking perspiration, often lays the foundation for severe colds, incipient fevers, and other diseases.

These ventilators are confidently recommended as preventives of the dire effects of the above-described powerful, though subtle agents of disease

FIG. 36.



Perspective View. *Sectional View.*

A practical Description of the above Sectional View.—Letter A denotes the top of a chimney; B, a cylindrical pipe, closely fitted with a rim and flange into the chimney; C, a cylindrical collar made to overlap about four inches, and large enough to turn freely around the pipe; D, a hollow cone so fitted and secured to the collar C as to retain, when in use, a horizontal position; E, a vane to keep the cone pointed to the wind; F, a perpendicular, substantial iron rod or spindle for the cone and collar to revolve upon; *a, a, b, b, c, c, e,* arrows representing currents of air.

Suppose the wind to blow as indicated by the arrows *a, a,* along the surface of the cone from its point to its base; on reaching the base of the cone it will converge as represented by the arrows *b, b, c, c,* and produce a partial vacuum at the mouth of the cone *o*, when a current of air will rush up the chimney A, as shown by the arrow *e*.

This draft-generating principle may easily be tested with a miniature model made of paper, or other material. Let a small flock of cotton or some other light substance be placed at the bottom of the pipe B, then hold the cone horizontally, the pipe being perpendicular, with its point to the breeze, or blow a blast of breath upon it, when a draft will be produced, and the cotton forced up the pipe through the cone with a velocity in proportion to the force applied.

Persons wishing to adopt this apparatus, or to purchase a right for manufacturing and vending the article for towns or counties, can communicate with the agent S. W. Dewey, 109 Front street, New York.

WE are favored, this month, with a continuation of Mr. Partridge's very valuable articles on City Manures; and we entreat the particular attention of our farmers to them. We trust, also, that our city papers will copy these numbers, for they can not possibly insert more useful or relevant matter for their readers.

For the American Agriculturist.

CITY MANURES.—No. V.

I HAVE already given our farmers an account of ten highly-fertilizing materials hitherto thrown away in the cities of New York and Brooklyn. I shall proceed now to bring to their notice two other such materials, viz., *wood saw-dust and urine.*

I lately read an article in the Bath and Cheltenham Gazette, published in the city of Bath, England, that a Professor Daniels had taken a patent for a new compost, composed of wood saw-dust, charcoal, lime, and a small quantity of bitumen. It stated he had secured patents in England, France, Germany, and this country. If any reliance can be placed on the statement given in that paper of its fertilizing power, it must far exceed all other known composts. It stated that the professor had taken a given quantity of land, on which he had raised wheat four years in succession, increasing the product every year. Our farmers must be aware that this has ever been considered impossible. The first year the land was in its usual condition, and the crop was twenty-six bushels to the acre; the second year he applied some of his compost, and the crop was thirty-six bushels; the third year he added more of his compost, and the crop was forty-six bushels; the fourth year he gave more of the compost, and the crop was fifty-six bushels. He expressed himself confident of bringing the crop up as high as one hundred bushels to the acre.

Our farmers on Long Island, and in New Jersey, must be aware, that their only chance of making money by farming, will be by an increase of crops; for our railroads will enable distant farmers to send their produce to our markets, at a very trifling cost of transit. Those of our farmers, therefore, who are wise, will avail themselves of every means of increasing their crops, as the only chance of breasting the competition with distant opponents, who produce from new soils, on land of one tenth the value.

It has been long known that decayed wood, frequently found on wood land, was much valued by the horticulturists. I often had it collected, in England, for my own garden; but as it was not very abundant there, it was always used on the flower-beds.

From the number of saw-mills at work in the cities of New York and Brooklyn, the annual supply of wood saw-dust must be very large; and I would advise some of our enterprising farmers to collect and try it in their compost heaps, adding slacked lime and fine charcoal. The lime is apparently applied to cause a more rapid decomposition of the saw-dust, and to neutralize any acid it may contain; but it will be seen, in the following article on urine, that when in the soil it plays an important part in promoting vegetation. I would advise our farmers to put the above-named compost into their barn-yards and hog-sties, where it will not only undergo a rapid change, but the charcoal will absorb and retain all the ammonia now lost by evaporation. If a portion of the saw-dust should be the product of pitch-pine timber, no bitumen need be added; but when this can not be obtained, a small quantity of crushed rosin or pitch may be added to the compost heap.

I shall proceed to bring to your notice the urine thrown away in our cities. In the first place, I will show you the component parts of vegetable matter, and of carbonate of ammonia. By comparing the two, you will readily appreciate the importance of saving every drop of urine from your own families and barn-yards, as well as collecting it from our cities. In this explanation I must necessarily use scientific terms, as we have no common terms in our language by which to express their meaning. By comparison, however, the terms will show you that the component parts of vegetation and of carbonate of ammonia are the same, excepting about eight per cent. of the solid portion of vegetation.

The average elementary portion of vegetables consists of about 480 parts of carbon, 65 of hydrogen, 369 of oxygen, 40 of nitrogen, and about 46 of solid matter, in 1,000 parts.

Carbonate of ammonia contains, in 100 parts, about 50 parts carbonic gas, 30 parts of ammonia, 20 parts of water. Carbonic gas contains carbon and oxygen; the ammonia contains hydrogen and nitrogen. Thus we perceive that carbonate of ammonia contains within itself the elementary portions of all vegetable products. There is no other known substance containing within itself all these elements, and hence is derived its wonderful fertilizing power.

Stale urine contains a large portion of ammonia and of ammoniacal salts, which are mostly lost by evaporation, as it will continue to do, unless some material be combined with it capable of retaining the ammonia. Charcoal is undoubtedly the best substance for this purpose, as it will take up and retain within its pores more ammonia than any other known material.

Charcoal is a valuable product in the soil, independent of its retaining ammonia when presented to it by human agency. "It absorbs in large quantity into its pores, the gaseous substances and vapors which exist in the atmosphere." It separates from water any decayed animal matters or coloring substances which it may hold in solution. It also holds moisture with a tenacity greater than any other known material.

Our farmers may tell me they are well aware of the value of urine, but may ask how are they to collect it in efficient quantity. I have thought of this difficulty, and believe it may be overcome by a little perseverance. There is a small shed behind the city hall, where many thousands of gallons might be annually collected. Let some farmer get the privilege from the corporation, of putting down a large receiver there under ground, filling it half full of fine charcoal, so as to take off the powerful effluvia—now so offensive—on condition of its being emptied twice a year, spring and fall. Let the same system be pursued at all the large eating houses and taverns. Instead of such places being as now, injurious to the health of the neighborhood, they would become perfectly sweet and innocuous. The difficulty would be greater in families; yet if it can be proved that those who inhabit houses can derive an annual income from attending to it, as well as take off all bad smells from every square in the city, I should presume the double inducement would make the system to be generally adopted. The greater portion of the urine of families is daily thrown into the privies. If every family would have theirs emptied once a year, and when emptied put into the vault two barrels of charcoal, and add one barrel of charcoal every month afterward, at the end of each year they would have about forty bushels of poudrette and urate, of a far better quality than any now sold, worth twenty-five cents per bushel to the person who may take it away, exclusive of the expense of removal. Thus every family might make a clear income of eight dollars per annum, beyond the cost of the charcoal, and keep the whole city free from the abominable, excrementitious effluvium now so pernicious to the health, and so obnoxious to the olfactories of our citizens.

It will be seen that carbon and oxygen form eight and a half parts in every ten of vegetable matter, and it is more than probable that carbonic gas supplies the whole of it. How amply has Infinite Wisdom provided for this immense demand! Can the geologist measure the carbonate of lime and other carbonates laid up by Creative Wisdom in our globe? Can the physiologist count the weight of carbonic gas daily exhaled by the animal creation? Can the philosopher form a distant conception of the immense supply hourly liberated by the rapid and slow decomposition ever progressing on our earth's surface? If man has not the power to measure or count the supply, he has *given to him the power to collect and apply it* for his individual and general benefit.

It was my intention to have explained, in this essay, the effect of lime in promoting vegetation when mixed in soils, as hinted when treating of its operation on saw-dust; but as this article is already too extended, I shall defer it to some future opportunity.

Wm. Partridge.

We have received the samples of wool of which Mr. Cockrill speaks. They are really very choice and fine, and would rank high in our market. An inspection of them would be evidence in favor of what he asserts, viz., that wool improves by taking sheep from the north to the south; an opinion which we have always entertained since we knew anything of wool. The most intelligent buyers here, with whom we have conversed, also assert the same, and we do not know who at the north maintains the contrary opinion. Our able correspondent upon Sheep Husbandry, in his communication—No. 3, in July number—says, that *five* cents per lb. extra, is paid by an extensive wool-purchaser for that grown in the southwestern states, on account of its *superior softness* over that grown at the north.

For the American Agriculturist.

IMPROVEMENT OF WOOL IN SOUTHERN LATITUDES.

Nashville, Tenn., 6th June, 1843.

Dear Sir:—I send you herewith six samples of Saxon wool. No. 1 was grown by me, when I had my flock in Mississippi, latitude 32½°, which I have proved to be the very best wool-growing country that I have ever seen. I have carefully sampled sheep from the south, as far north as Boston, Massachusetts, of all the different bloods, and find the same breed producing far better wool in a southern than northern latitude. I have compared wool grown by me in latitude as above, with American, and many imported samples, and find that wool in the south is softer, finer in the fibre, and more beautiful. I now have my flock near Nashville, where they do not do as well as in the south. In the south they live almost all the year upon green food.

You will find the samples sent you, soft, fine, and of the true length for the first quality of cloth, and, I think, not inferior to any you can procure. I would be pleased to hear how this wool is liked in the north, and what your northern people found their opinion upon, when they say the south can not grow fine wool. Spain and Australia are the most successful wool-growing countries. Spain, where the fine-woolled sheep originated, is an orange-growing region. Yours truly,

Mark R. Cockrill.

For the American Agriculturist.

POUDRETTE AS A MANURE FOR FALL CROPS.

Dear Sir:—The question has been often asked by farmers, whether *poudrette* is a good manure for *fall crops?* whether it will answer for *wheat?* and if it will produce a crop of grass after wheat, or whether its fertilizing properties are absorbed by the first crop? With your permission, I will give a few short extracts from letters received from practical farmers, who have used it on wheat, in comparison with other manures; and the best evidence I can possibly have of the estimation in which it is held by them, is in the fact, that they have purchased this year, and used it in larger quantities than any previous year.

Mr. Lemuel Soper, of Huntington, L. I., says: "I also used poudrette on wheat, at the rate of forty, sixty, and even seventy bushels to the acre. Where I used forty bushels to the acre, I got *as good wheat* as where I used forty wagon loads of barn-yard manure, and *equally as good* as where I used sixty or seventy bushels of poudrette to the acre."

Mr. Edward Condict, of Morristown, N. J., says that "early in October last, I used the poudrette on a loamy soil, somewhat inclining to clay, which I had prepared for wheat. There was no difference in the soil, nor in its preparation, except that on about one fourth part of it, after the wheat was sown, about twenty bushels of the poudrette to the acre was also sown, broad cast; and the result is, that on harvesting that part where the poudrette was put, is much the heaviest grain, and but very little injured with the rust or mildew, while the other part of the field is considerably injured."

Mr. Samuel Fleet, of Hastings, Westchester county, says that he "finds it very efficient, if applied when seeding down. The seed *took* much better, in the same field, where poudrette was applied at seeding, than where other manure was used, the whole being put down at the same time."

Mr. Wm. Wickham Mills, of Smithtown, L. I., says that "where the poudrette was used, the wheat came in well. It stood the winter well, and the berry was fair; but where bone was used, about the same cost to the acre, in the same field, it was winter-killed, and very much shrunk, and the produce was only about one half the number of bushels to the acre."

Captain R. B. Coleman, of New York, used 125 bushels of poudrette on his farm, near Poughkeepsie, in the fall of 1839, on wheat, at the rate of twenty-five bushels to the acre. His object was to lay it down to grass, and he desired to ensure good crops. June 5th, 1842, he says, "The ground on which the poudrette was put, can be distinctly marked out, by the luxuriant growth of grass on it being superior to that adjoining."

From these extracts it will be seen, that *practically* the questions asked in the commencement of this article, are answered in the affirmative; and it is the opinion of those who have had good opportunities to judge correctly, that it will be found as valuable for fall crops as for corn and other spring and summer crops.

D. K. Minor.

New York, July 13*th*, 1843.

ROAD-HORSES.

For the last seven years of our life, we have been strenuous in deed, and by word and pen, endeavoring to awaken the attention of the public to breeding a better race of road-horses throughout the country. But we might just as well have undertaken to galvanize the dead, as stir up the great body of our farmers to this important subject. There would now and then come a short spasm, and an occasional throe from some spirited man or two in different quarters of the land, and then all would die away again, and remain cold and stiff, till at last we almost gave the thing up in despair. It is therefore particularly gratifying to us, to have recently received a letter from Dr. A. Campbell, of Middletown, Ohio, dated the 8th of last month, from which we make the following extract:

Bellfounder is doing a good business here the present season. Since he has shown specimens of his stock among us, he has become emphatically the "Lion of the day." He has had eighty mares already, and I have now sent him to Mr. Steddoms, at Lebanon, to make a fall season; and although there less than a week, seventeen more have been engaged to him. He is in the finest condition imaginable. His tail is very thick, and has grown so long that it absolutely drags now upon the ground. His colts excel in size, &c., the expectations of every one who saw the horse last season. The Pennsylvania Germans settled here are especially pleased with him.

Mr. Munson Beach, of Lebanon, Ohio, also writes a friend in this city to the same effect as the above; and we are rejoiced for the sake of the farmers of that district, and the improvement of their horse stock, that they can appreciate in a small degree, the value of so excellent a roadster as Bellfounder.

Viator's compliments to John Fitz, Esq., of the Prairie Farmer, assuring him that the sugar in question had no part of a muskrat skin boiled down in it, but only partook of some 'possums, with a sprinkling of the 'coon.

Manitouwoc, July 13*th*, 1843.

For the American Agriculturist

SOUTHERN CALENDAR FOR AUGUST.

Make it a matter of especial attention to have everything in readiness for picking cotton. It requires only the same time to prepare, and if done in time, you will have no detention. I therefore urge you to examine baskets, sacks, gin stand, gin band, running gear, presses, &c., and if anything requires repairing, do it immediately. Continue your improvements all spare time, such as grubbing, &c.; repairing fences about lots, repairing buildings, making shingles and scaffolds to sun cotton.

Cut crab-grass hay, throw into heap-rows, there to remain for a day, then into tall narrow heaps until cured. Clean your potato plantings, designed for seed or slips. Gather the fodder from late corn. Thrash the grain derived for fall sowing, to provide against loss of time from cotton-picking, when the seed will be wanted, and that you may have the straw to pack away with the pea-vines, if you intend to save them.

Prepare turnep ground at once, if not done, a day or two extra work will not be missed 100 years hence, and you will be well paid. Procure Dale's hybrid turnep seed, and sow on the 15th, rain or no rain, Sundays always excepted. Sow half a pint of seed to the acre, any how, though old folks say a tablespoonful is enough; I would rather have a pint cup full. Unless the earth be wet, or decided appearance of rain, I would advise covering by brushing in: the last season taught me this. I had more turneps in half-a-dozen rows, where brushed, than on 8 acres where harrowed in. The ground should be made fine by frequent harrowings and plowings, then a brush rather settles the earth to the seed.

Bud peach-trees of this year's growth, the best if well cultivated. Procure buds from your neighbors, even if at a distance of 10 to 20 miles, to choice fruit; the same labor will grow a tree producing a delicious fruit, as one of those little tasteless hard things too often seen.

About the middle of this month, cotton will have sufficiently ripened and burst its covering, to permit your hands to average some 30 to 50 or 60 lbs. per day. When you can gather this amount, get to it; you will save much of that which has opened from rain or injury, by hands passing between rows. Open the branches out to the sun, and a freer circulation of air, causing it to open sooner, and not to rot for want of the sun to open it, and you will be the better able to keep up with the opening.

Top cotton early in this month, if not done the last of July.

M. W. Philips.

For the American Agriculturist.

NORTHERN CALENDAR FOR AUGUST.

Kitchen Garden.—Finish planting savory and other cabbages for late autumn and winter use. In the early part of the month spinach for fall use can be sown, and that for early spring use in the latter part of the month. To endure the winter well, the latter should be sown on dry, gravelly ground. Turneps for autumn or winter use should be sown in the early part of the month. Plant now a crop of late celery, and continue to throw up the earth to the growing crops of celery. Small salading can still be sown every week. If the weather be favorable, peas and kidney beans may be planted in the early part of the month. They may produce a good crop, although the chances are somewhat against it: Lettuce for fall use can be sown and transplanted from former seed beds. Crops of melons and cucumbers should be kept particularly clean, and if the weather be very dry, moderately watered in the evening. Lima and Carolina beans hoe well, and all runners that trail upon the ground cut off; they only take sustenance from the bearing vines. The manure heap should now be kept clear of weeds, which would otherwise ripen and grow in the ground on which the manure is placed the ensuing year.

Fruit Garden and Orchard.—This month is the most suitable time for budding apples, pears, plums, cherries, nectarines, apricots, almonds, &c. Keep the ground entirely clear among the seedlings and small trees.

Flower Garden and Pleasure Grounds.—Transplant from the seedling beds the various kinds of annual, biennial, and perennial flowers, that were not transplanted last month. Plant your bulbs which may be out of the ground, such as crocuses, colcluchens, narcissus, amaryllis, frittillarias, crown imperials, snowdrops, lilies, irises, and martagons. Also take up, separate, and transplant the roots of pæonias, flag-irises, and other tuberous-rooted flowers, whose leaves are decayed. Suckers that have been thrown up from fibrous-rooted plants can be taken off and transplanted. Collect and transplant flowering plants from the woods and fields, removing them with a ball of earth, and cutting off the flowering stems if there are any. Water freely all newly-planted flower-roots; cut down the stems of those that have bloomed; loosen the earth about potted plants; clip hedges if omitted last month; mow the lawn once a fortnight; keep clean and in order the gravel-walks, flower-borders, and shrubbery. Trim and tie up straggling plants, and inoculate all you wish to propagate in that way. Gather flower seeds as they ripen; but let them remain in the pods until the season for sowing.

FOREIGN AGRICULTURAL NEWS.

By the steam-packet Caledonia, we have our files of European journals to the 4th July.

Markets.—Cotton has fallen ⅛d. per lb., and accounts from this side of the water, of the prospects of the coming crop being more favorable, together with the large stock on hand, has had a depressing effect upon the market. The import into Liverpool for the past six months amounted to 1,150 000 bales, against 826,000 to the same period last season. The supply from the United States was 1,038,000, being an increase of 354,000 bales. The stock on hand the 1st July, was 912,000 bales, against 645,000 bales at the same time last year. The import and stock has been increased the last three days, by the further arrival of about 60,000 bales of American cotton. American provisions of all kinds were fast overcoming the prejudice which interested people had got up against them, and were in good demand, with an upward tendency. In Beef, Pork, Lard, Butter, Cheese, Tallow, and Oil-cake, a heavy business was doing. American oil-cake has taken precedence over the French, and almost annihilated importations from that quarter. Little was doing in Grain and Flour; the market however was firm.

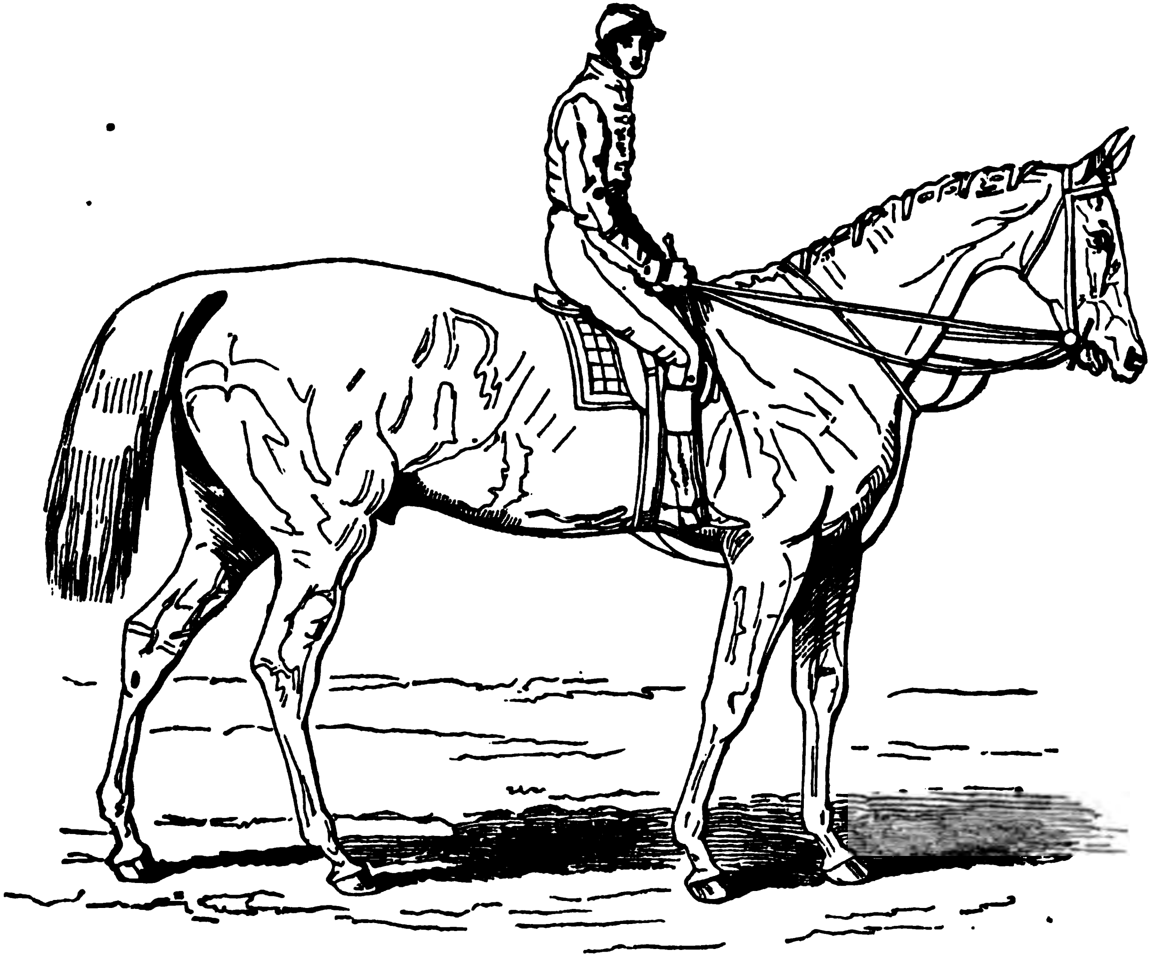
Money is very abundant, and great difficulty existed on the part of capitalists to invest advantageously. It is not worth over 1½ to 2½ per cent. per annum; and no doubt good *unrepudiating* American stocks will be soon sought for by European capitalists. Up to the present time, however, they are shy of pretty much all our securities for investment. The flow of specie to this country has nearly stopped.

The *weather* was fine, and crops promising.

At a meeting of the Roy. Ag. Society of England, on the 21st June, Lord Portman in the chair, the following communications were made:—

Food Steamer.—Mr. Henry Colman, Agricultural Commissioner from the United States, presented to the Society a model and sectional drawing of Atwater's Steam Generator, for domestic use, for cooking food for cattle, and for several other purposes to which steam may be applied. Mr. Colman entered into a minute explanation of the construction of this new steaming apparatus, and stated that the principal advantages of the invention were the rapidity with which steam might be produced, the little cost of the machine, the small amount of fuel it required, and its portableness.

Indian Corn Sugar.—Mr. Colman likewise presented a sample of sugar made from the stalks of Indian Corn, or maize (*Zea Mays*). This was a fair sugar, and in the state in which it was taken from the pans after the evaporation of the juice. Mr. Colman considered that this sugar might be made a valuable product wherever the Indian Corn could be grown; and stated that the plant, when sugar is to be made from it, is not allowed to ripen, or form its seed, and that the stalk only is used. The leaves or blades, and top of the stalk, called the spindle, may be saved for fodder, and the stalks, after they have been pressed, will furnish feed for cattle. Mr. Coleman remarked that it had been already ascertained that more than one thousand pounds of sugar can be obtained from a single acre, and he had no doubt that probably double that amount would eventually be obtained by proper cultivation and management, the manufacture being yet in its infancy; but that in respect to cost, quality, and the facility with which farmers may supply themselves with this important article of domestic consumption, the best results might confidently be anticipated. The sample then



COTHERSTONE, WINNER OF THE DERBY, 1843.—(FIG. 37.)

DESCRIPTION.—Cotherstone is a good bright bay, stands rather over fifteen hands two inches high, with black legs and one white heel behind; head rather plain and large, good deep shoulders, well thrown back; very deep in the girth, round body, splendid quarters, well let down, and looking from behind him, very wide hips, showing great power; carries his tail a little away from his quarters; good strong arms, thighs, and hocks, short from the hock to the ground; very sound clean legs and feet; has a fine temper, good hardy constitution, and altogether presents the appearance of a powerful, racing like nag.

PEDIGREE.——Cotherstone was bred in 1840, got by Touchstone (winner of the St. Leger in 1834), out of Emma (the dam of Mundig, the winner of the Derby in 1835, and of Trustee, the sire of *Fashion*), by Whisker (winner of the Derby in 1815), her dam Gibside Fairy by Hermes, out of Vicissitude by Pipator—Beatrice by Sir Peter, &c.

We are indebted to the politeness of Wm. T. Porter, Esq., editor of the Spirit of the Times, for the accompanying graphic cut of one of the best horses which England has lately produced. We saw some of this sort of stock while recently in England, and greatly admired it. Cotherstone has substance enough about him to get good roadsters.

submitted to the notice of the council was derived from a first attempt at the production of the Indian corn sugar in America, but there was no reason why similar success should not attend the trials made in this country.

Flax.—Mr. Colman also presented to the society several specimens of flax, prepared by steam, with a view to its being spun on common cotton machinery: namely—

Specimen, No. 1.—Green flax broken, and the fibres separated entirely by the action of machinery, and called the "stem flax."

Specimen, No. 2.—Green flax broken, the fibres separated, and the glutinous matter washed out entirely, by the action of machinery and pure cold water.

Specimen, No. 3.—Flax which had gone through the same processes as the two former specimens, with the addition of hot water, and a small quantity of alkali in the last water; also shortened and equalized for spinning.

Specimen, No. 4.—Yarn spun from flax in specimen No. 3, on a cotton throstle, with the preparation and carding altered.

Mr. Colman, at the same time presented a specimen of perennial flax, a plant growing wild in Calhoun county, Michigan, U. S., and transmitted to him by Mr. T. I. Walker, of Eckford.

Silk and Cotton.—The following specimens of silk and cotton were also presented by Mr. Colman to the society:—

1. A specimen of wild silk found upon the forest tree in the interior of Mexico, produced by an insect, said to be of the spider family, and resembling floss silk.

2. A specimen of silk-cotton, from a tree of the Bahama islands.

3. A specimen of native cotton, found growing in a wild state in the interior of Mexico, the produce of a large tree.

Mr. Pendarves, M.P., then moved a vote of thanks to Mr. Colman for the interesting specimens and details he had brought under the notice of the council; and having dwelt on the advantages the society would derive from the information Mr. Colman, as one of their honorary members, would from time to time lay before them during his present visit to England, he would, he trusted, be enabled, after his agricultural tour through the kingdom, and especially after his personal attendance and inspection at the ensuing Derby meeting, to carry back to America a favorable report of the agricultural improvements of the Old Country.

The noble chairman was quite sure that the proposition then submitted to the council required no seconding; and the motion being put, the vote of thanks was carried unanimously.

Protruding of the Uterus.—The Stamford Mercury says, that a cow, the property of Mr. Evison, of this place, a short time since, soon after calving, protruded the uterus. Mr. Raynor, of Candleby, farrier, being called in, cut off the part, and to the surprise of every one acquainted with the operation, the cow is doing well.

On the Relative Influence of the Parent Animals on the Sex of the Offspring.—In the Ten Towns Messenger, are some curious observations on this subject, which we extract.

The influence exerted by the relative age of the parents in determining the sex of the offspring, I think I shall show to be considerable, all other things, as health, and condition, nature of keep, &c., being equal.

If the male is younger than the female, or if they are of the same age, the offspring will probably be female.

If the male is but very little older, a few months or a few years, according to the longevity of the kind of animal, the sex will be doubtful, and probably depend on their relative health and strength at the time of impregnation.

And lastly, if the male be considerably older than the female, while yet his animal powers are undiminished in vigor, the greater the difference, the more likely will it be that the offspring shall be male.

The following table is illustrative of the relative influence of the age of the parents on the sex of the offspring. This table is drawn up from the records of the British peerage, where, of course, every particular of marriages and births has been for ages recorded.

Where the husbands were younger than the wives,
to 100 girls were born 86 boys.
" " of the same age as the wives,
to 100 " " 94 —
" " older from 1 to 6 years,
to 100 " " 103 —
" " older from 6 to 11 years,
to 100 " " 126 —
" " older from 11 to 16 years,
to 100 " " 147 —

It will at once be seen, that the influence shown by this table is too striking to be the result of chance. It is drawn up from the ages alone, without taking into consideration any secondary causes, and yet, notwithstanding this, the probability is shown to be nearly as high as *three* to *two* in the extreme. Now, should the analogy hold good between man and domestic animals (and there is every reason to believe it does, in a great measure, with such as produce one or rarely more at a birth), I think it will be granted me, that this influence is sufficiently great to demand our attention. This, however, is the point at issue, which I hope your readers will aid in solving.

That the relative condition of the health and strength of the parent animals at the time of impregnation should have some considerable influence in determining the sex of the offspring, where the age and other circumstances are equal, it is easy to conceive, but very difficult to prove. I have no facts to offer on this head, but the very marked manner in which the offspring in other respects sometimes takes after one parent, sometimes after the other, successively, is strong presumptive evidence that such would be the case with reference to the sex.

Ventilation in the Cheese-room.—Mr. Livesey, in the Preston Chronicle, contends strongly for a plentiful supply of pure air where cheese is kept. He says full one half of the cheese, last summer, was very much faded and strong-flavored, and had to be sold at a reduced price; in many instances, so much as 10 per cent. below the price of a good article. Although there are other causes which produce these effects, I have no doubt the chief cause was keeping them in close, small, confined rooms. I scarcely ever go into a cheese room, but I find both the door and window closed; and when these rooms are filled with cheese, the air is so bad and polluted, as almost to be suffocating. My first effort is, generally, to get the window open; but in this I am often frustrated, for I find it either without any opening, or nailed up; and in many cases the cheese are crammed into a small room, without window or any means of ventilation whatever. Cheese being *animal matter*, can not have too much air. I have noticed for some time, that those dairies that have been kept in a large well-aired room, have been quite sound; and those kept in a close, sickly room, were either faded or very bad in the flavor. Though cheese should not be kept in too high a temperature, yet they will bear the summer heat tolerably well, provided they have a constant supply of good air. There is no objection to a little artificial heat, in winter, from a stove or a fire, but this should always be accompanied with a supply of pure air. The difficulty to contend with is twofold: first, the want, in many farm-houses, of a suitable cheese-room; and, secondly, the prejudices of the dairymaids. They have a long-cherished idea in favor of closed doors, and closed windows, and dark rooms. To prevent flies, they sometimes say, is the reason for keeping the room dark and close; but this is the best plan for increasing them, by producing putrid matter in the cheese. And as for flies, a pennyworth of quassia chips, boiled in a pint of water, well sweetened, and put on plates, will kill thousands directly. As I have this week seen several lots of new cheese, in close-confined rooms, which, if they are kept for any length of time, are sure to rot, I am the more anxious to warn the cheesemakers in time, now that hot weather is approaching, to open the doors and windows of their cheese-rooms; and, in cases where there are no openings, either to set their husbands or the joiners at work, immediately, to make them.

The Edinburgh Journal of Agriculture for July is an excellent number, from which we have space to merely condense a paragraph or two.

The Decomposition of Manure mainly depends upon the presence of moisture, and, during the process, a certain degree of heat is created. *Water*, therefore, is decomposed in the first instance, and experiment has proved that, during that phenomenon, a stream of electricity passes, to an extent so vast as to strike one with awe. It is fair, then, to infer that electricity, revealed by the decomposition of water, disturbs all the elements of the manures, and induces them to recombine in the form of ammonia, carbonic acid, and humus.

Night Soil contains all the elements of every plant, and in a state of combination which proclaims it to be superior. Why do we neglect it? Why, on the contrary, do we divert it to the worst of purposes? Were it duly collected, condensed, and applied, our farms would require no foreign appliances, no expensive importations, or spurious attempts at imitation.

Potato Starch.—We find in the Cleveland Herald the following method of making potato starch, and it says it is the veritable Bright Farina and Arrow-root which we see so highly lauded in the London papers.

Take half-a-dozen large and smooth potatoes, wash them in clear fair water, and then carefully pare off all the rind. Next grate them fine with a suitable tin grater. The pulp must be mixed with a pailful of cold water, and thoroughly agitated and squeezed by the hand or any suitable instrument, at the same time throwing away the fibrous matter, and permitting the starch to subside to the bottom of the vessel. To this must be repeated fresh washing of cold water, till the pure Farina is obtained free from all other matter. This should then be spread on earthen dishes, and dried in a warm airy situation.

The good housewife will exclaim, "Why this is nothing but potato starch." True, it is not, nor have you used any other article under the name of arrow-root for the sick members of your family, though you may have purchased it at the rate of several shillings per pound.

By proper modes of cooking, known to every nurse and housekeeper, this article becomes a delightful beverage for invalids weak of digestive powers; while as a pleasing dietary, even to persons in good health, it possesses a strong attraction.

Editor's Table.

NOTICES OF THE PRESS.

It is proposed to publish the following national work, viz: The Trees of America, pictorially, botanically, and entomologically delineated; embracing a Complete Description of the Forest Trees of North America, their culture, management, and propagation; uses and economy in the arts; introduction into commerce; and their application in useful and ornamental plantations, and in landscape gardening. By D. J. Browne, author of the Sylva Americana. This work has been prepared, as far as practicable, in accordance with the plan proposed by the author in his Memorial praying Congress to adopt measures for procuring and preserving a supply of timber for naval purposes. —[Doc. 241, 25th Congress, 2d Ses.]

Conditions of the Subscription.—The work complete will form a beautiful imperial 8vo volume of 500 pages, ornamented with 300 fine wood engravings printed in the text, and published in ten numbers at 50 cents each, or $5 a volume, bound in cloth. Mr. Browne for a long number of years, has been devoting his attention to the subjects of the above work; we have seen a part of it in manuscript, and can assure the public, that it will undoubtedly be the best and most complete book ever published on the Forest Trees of America.

Economy of Farming.—We are glad to learn that a work called Economy of Farming, translated from the German Manual of Land Husbandry of J. Burger, Professor of Agriculture in Vienna, with notes from the works of Thaer, Veil, Schwertz, Sprengel, Petri, and others, with an index by E. Goodrich Smith, will soon be issued from the press of Leavitt & Trow, of this city. From the specimen we have seen of the work, we think it will prove a valuable addition to the works of agriculture already offered to the public; as it contains a great variety of estimates of the proportions of labor, fodder, and manure, and the relations of the different parts of the farming operations to each other. We understand the work will be published in an octavo form, on good paper and type, with a large page, and that it will make a pamphlet of 130 or 140 pages, and will be sold by the single copy at a price not to exceed 50 cents. It contains much curious and useful practical knowledge, as the results of numerous experiments of a practical kind are given with great accuracy. The original work from which it is taken, has passed through nine editions, in Germany. The translation and notes have cost much labor, and the value of the work has been enhanced. The translator was employed in the preparation of the late Reports on Agriculture by the Commissioner of Patents, and the present work has Mr. Ellsworth's commendation.

The Western Farmer and Gardener, published in Cincinnati, Ohio, edited and illustrated by Charles Foster, assisted by M. W. Philips, of Miss.—24 pages, double columns octavo, monthly; price $1 a year. We are glad to see this excellent work revived, and wish Mr. Foster all possible success in it. He is in the centre of a broad and fertile country, whose principal products are those of agriculture, and such journals as these should receive a liberal support. It is a double number—11 and 12 of Vol. III.—which we have received. The matter is good; the cuts numerous and appropriate. That of the Cotton planter, or Sand-hill Hog, is a *caution* to all beholders, and in gazing upon his delectable proportions, our optics "acknowledge the corn," as they say at the west, for this certainly beats our immortal Land-pike and Alligator "into fits."

Lectures on the Application of Chemistry and Geology to Agriculture, by Jas. F. W. Johnstone. Published by D. K. Minor, 23 Chambers street; Saxton & Miles, 205 Broadway; and Saxton, Peirce, & Co., Boston. 180 pages, price 37½ cents. This is Part III. of these able and lucid lectures, the very best, certainly, upon these subjects. The public may well be obliged to the publishers, for issuing it in so portable, neat, and cheap a form. No farmer should be without this work.

The Encyclopedia of Geography, by Hugh Murray Part XI. is out, price 25 cents. Lea & Blanchard, Philadelphia, publishers. C. S. Francis & Co., 252 Broadway.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, JULY 24, 1843.

ASHES, Pots,	per 100 lbs.	$4 50	to	$4 56¼
Pearls,	do.	5 31¼	“	5 37½
BACON SIDES, Smoked,	per lb.	5½	“	6
In pickle	do.	5	“	5½
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	22 00	“	24 00
BARLEY	per bush.	46	“	48
BEANS, White	do.	1 12½	“	1 25
BEEF, Mess	per bbl.	8 00	“	8 25
Prime	do.	5 75	“	6 25
Smoked	per lb.	7	“	7½
Rounds, in pickle	do.	4½	“	5½
BEESWAX, Am. Yellow	do.	28	“	30
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	12	“	15
Shipping	do.	6	“	10
CANDLES, Mould, Tallow	do.	9	“	12½
Sperm	do.	20	“	35
Stearic	do.	19	“	24
CHEESE	do.	4	“	7
CIDER BRANDY, Eastern	per gal.	40	“	45
Western	do.	28	“	30
CLOVER SEED	per lb.	6	“	8
COAL, Anthracite	2000 lbs.	4 50	“	5 25
Sidney and Pictou	per chal.	5 50	“	6 00
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	57	“	58
Southern	do.	56	“	58
COTTON	per lb.	5	“	10½
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	14	“	16
FEATHERS	per lb.	19	“	28
FLAX, American	do.	7	“	7½
FLAX SEED, rough	per 7 bush.	9 00	“	9 37½
clean	do.	— —	“	— —
FLOUR, Northern and Western	per bbl.	4 87½	“	5 50
Fancy	do.	5 75	“	6 00
Southern	per bbl.	4 75	“	5 50
Richmond City Mills	do.	5 75	“	— —
Rye	do.	3 37½	“	3 50
HAMS, Smoked	per lb.	5½	“	7½
Pickled	do.	4	“	5½
HAY	per 100 lbs.	45	“	50
HIDES, Dry Southern	per lb.	9	“	10
HEMP, Russia, clean	per ton.	200 00	“	205 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	11	“	15
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5	“	8
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 87½	“	3 25
Corn	per hhd.	14 00	“	14 50
MOLASSES, New Orleans	per gal.	22	“	24
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	27	“	29
Southern	do.	22	“	24
OIL, Linseed, American	per gal.	75	“	80
Castor	do.	57	“	60
Lard	do.	60	“	65
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 00	“	2 25
Ground, in bbls	per cwt.	50	“	— —
PORK, Mess	per bbl.	11 00	“	11 50
Prime	do.	9 00	“	9 50
RICE	per 100 lbs.	2 75	“	3 00
ROSIN	per bbl.	70	“	1 06¼
RYE	per bush.	65	“	67½
SALT	per sack	1 40	“	1 50
SHOULDERS, Smoked	per lb.	4	“	4½
Pickled	do.	3	“	3½
SPIRITS TURPENTINE, Southern	per gal.	29	“	31
SUGAR, New Orleans	per lb.	5	“	6½
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6½	“	7½
TAR	per bbl.	1 62½	“	1 87½
TIMOTHY SEED	per 7 bush.	11 00	“	13 50
TOBACCO	per lb.	3	“	7
TURPENTINE	per bbl.	2 25	“	2 50
WHEAT, Western	per bush.	1 12½	“	1 15
Southern	do.	1 10	“	1 15
WHISKEY, American	per gal.	22	“	24
WOOL, Saxony	per lb.	35	“	40
Merino	do.	30	“	35
Half-blood	do.	25	“	27
Common	do.	18	“	22

New York Cattle Market—July 24.

At market, 900 beef Cattle, (750 from the south,) 50 Cows and Calves, and 1800 Sheep and Lambs.

PRICES.—*Beef Cattle* were very dull, and prices barely maintained—we quote $3 50 *a* $5, with a few at $5 25. 150 unsold.

Cows and Calves.—All taken at $15, $25 *a* $28.

Sheep and Lambs.—Sales 1600 at $1 12½ to $2 50 for Lambs, and $1 to $3 25 for Sheep, which is a decline.

REMARKS. *Ashes* are in good demand. *Candles*, firm. *Cotton*, notwithstanding the late news per Caledonia of fall of price in England, the large stock on hand, and the depressing state of the market, there is no alteration here; and the article is held firm at previous prices, in consequence of an expected short crop. Export since 1st September last, 1,950,913 bales; same time last year, 1,412,740; same time year before, 1,248,670. *Flour* and *Grain* of all kinds in good demand, and an active business is doing in them. *Hay*, the same. *Hemp* in moderate request. *Molasses* and *Sugar* advancing. *Naval Stores*, large sales. *Provisions* in fair demand. *Seeds* are rather improving. *Tobacco*, an upward tendency. *Wool*, a very active demand, and prices full 25 per cent. higher than three months ago.

Money, 3 to 4 per cent. on good paper, 6 to 7 per cent. on bond and mortgage

Stocks are firm and advancing.

Crops.—We have gloomy accounts from the bottoms of the Mississippi—deluging rains, and overflow of the river have seriously injured the cotton, rice, and sugar. In other parts, the crop it is thought will be a fair one. The wheat and hay harvest is nearly over, and the crops are an average, taking the whole country through. Corn looks well, though still late. There has been great want of rain along the seaboard, but at the west an abundance. Grass and root crops, of course, have suffered here, but not at the west.

Business generally is good, and confidence seems at last to be restored. Most of our manufactures are in full operation, and everything seems to be upon a solid foundation.

TO CORRESPONDENTS.—Americus, No. 4, S. W. Jewett, George Vail, and several others, are at hand. We must repeat, that anything received *later* than the 20th, can not have an insertion in the No. of our paper to be issued on the 1st of the next month; and to insure an insertion, it would be better to be here as early as the 10th.

WHEAT-SHEAF FARM ON STATEN ISLAND FOR SALE.

A recent domestic bereavement has induced the undersigned to offer his residence on Staten Island for sale. It is situated midway of the outer bay, on the sea-shore, eight miles from the Quarantine ferry, three from that of Rossville, and equi-distant from two others—Seguin's landing, and Port Richmond.

The condition of the Farm, the extent, value, and practical usefulness of the improvements, and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upward each, including an appropriate allotment of woodland; each division offering a moderately elevated building location. The condition of the soil is well known to be in the best working order.

Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product.

W. A. SEELY,
New York, Feb. 16, 1843. 218 *Fulton street.*

Sale of Durham Cattle, Hereford Bulls, and South Down Sheep.

The subscriber, desirous of reducing his stock, will offer for sale at auction, on Wednesday, the 13th of September next, at 10 o'clock *a.m.*, at Three Hills Farm, 3½ miles west of the city of Albany, on the Cherry Valley road, 25 head of cattle, consisting of bulls, cows, heifers, and calves, and between 70 and 80 head of South Down sheep, comprising bucks, breeding ewes, yearlings, and lambs, bred from the stock imported by Mr. Hawes, in 1832, and from bucks imported since.

Messrs. Corning and Southam will also offer at the same time and place, some of their celebrated Hereford bulls of different ages.

C. N. BEMENT.
Three Hills Farm, Albany, June 1st, 1843.

CHARCOAL & CHEMICAL MANURES.

The subscriber has 5 to 1000 bushels of fine Charcoal Screenings, which he offers for sale, at 12½ cents per barrel. He can also supply compound guano manure, and any of the other chemical manures, such as sulphate soda, sulphate of ammonia, &c. He will give estimates of cost of any composition that farmers may require for experimenting, &c., upon application, post paid. Engaged in the chemical manufactures for 30 years past, he feels confident of giving satisfaction in the articles ordered.

April 21. JOHN BARLING,
Commercial Works, Jane St., between Washington and West streets.

SHORT-HORN DURHAMS.

Three or four Durham Heifers, one and two years old, and three young Bulls, from 10 to 13 months old, are offered for sale by the subscriber. Some of these young animals are got by his imported Bull, Duke of Wellington, bred by Thomas Bates, Esq., Kirkleavington, England. The stock of Wellington will carry its own recommendation. The two-year-old Heifers are, and will be in calf, by Wellington, or his son Meteor, out of his imported Heifer, Dutchess, which latter animal was also bred by Mr. Bates, and got by his prize Bull, Duke of Northumberland. Inquire of A. Clockie, on the farm, or of the subscriber, at his residence in Troy. GEO. VAIL.

Troy, July, 1843—2t.

FOR SALE—Village Property, Improved Farms, and Grist Mill.

The subscriber offers for sale his Residence, the adjoining Dwelling-house and Store, and the Tavern Stand, "Bainbridge House," all situated on the public square (opposite the Presbyterian and Episcopal churches), in the beautiful village of Bainbridge, Chenango county, not surpassed for beauty and healthfulness, by any village west of Catskill, being in the valley of the Susquehannah, and on the bank of that much-admired river. The Dwellings are each double two-stories, with suitable outbuildings; the Gardens large; and the court-yards well supplied with various kinds of shade Trees and Shrubbery. The Store is two stories, in the centre of the village, and well arranged for business. The Tavern House is a large two-story Building, with Piazza the whole front, on the square, in good order, and with a suitable Barn and Sheds. The occupant is doing a good business. The Grist Mill is adjoining the village and Corporation, has two run of stone, and a good share of business, and five acres of land attached, with a small convenient dwelling-house to accommodate the miller.

Fifteen valuable Improved Farms of 100 to 300 acres each, with Houses, Barns, Sheds, and Apple Orchards sufficient for their use, situated in the immediate vicinity of the villages of Unadilla, Bainbridge, South Bainbridge, Bettsburgh, Ninevah, and Harpursville. Several of these farms are adjoining the New-York and Erie railroad, as laid out, an[illegible]re of the first qua[illegible] dairy farms, now stocked, which might [illegible]d w[illegible]the farms i[illegible]ed.

Also the "Vallonia" [illegible]ng [illegible] Establishm[illegible]with 90 acres of land adjoining the New-[illegible]rk [illegible] railroad, [illegible]ding a good House, well fitted up for boarders, a new Store, with a small Dwelling-house, and suitable Out-buildings, Barn, Sheds, &c. This spring is mineral, and at present much frequented by invalids for its medicinal qualities; and upon the completion of the railroad will no doubt be a fashionable resort for those in quest of health or pleasure, it being delightfully situated in a healthy and picturesque county. The above property will be sold in parcels to suit purchasers; and a large proportion of the purchase money may remain on bond and mortgage, for a term of years, at the option of the purchasers, or it would be exchanged for improved property in the city of New-York or Brooklyn. Inquire of T. T. Kissam, 169 Maiden Lane, (corner of South St.) New-York city, or of the subscriber, at Bainbridge, Chenango county, N. Y.

PETER BETTS,

SHEEP FARM FOR SALE.

The subscribers offer for sale, or to let, their extensive Sheep Farm, situated in La Salle county, State of Illinois. The Farm consists of upward of 1,500 acres; over 400 being enclosed by substantial picket-fence, and improved; the balance, dry rolling prairie, and timber, most admirably adapted to sheep husbandry, for which purpose it has been used by the subscribers for the last two years successfully.

The Flocks of Sheep can be sold at the same time, if purchasers are inclined. They consist of over 1,500 good, strong, healthy, white-faced Cheviot breed; also, three fine Pauler Merino Bucks, purchased of a celebrated breeder at the east.

If the Farm can not be sold for cash, offers will be received for renting the same for two or three years.

Apply either to JOHN ROSE, Little Vermillion, La Salle, MURRAY & WARD, Chicago, Ill., or JAMES MURRAY & Co., Buffalo, New York; either of whom will give every information wanted.

CHARLES STARR, Jr.,

MENDHAM, MORRIS COUNTY, NEW JERSEY,

Is prepared, at the present time, to execute orders for thorough-bred Berkshire Pigs, from the imported boar Hagbourn, and a superior boar of Windsor-castle family, and fifteen choice sows, lately procured from A. B. Allen, of Buffalo, New York.

Pigs from this superior stock, from 2 to 3 months old, will be delivered, well caged, on shipboard, at New York, for $25 to $30 per pair. Feed furnished, when desired, at $3 per barrel.

Persons desiring either pigs or full-grown animals, can be supplied with all the advantages of Mr. Allen's stock at Buffalo, without incurring the risk and cost of canal transportation—the advertiser's residence being but half a day's journey from New York.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 miles, without the State.

ADVERTISEMENTS will be inserted at One Dollar, if not exceeding twelve lines, and in the same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume 1 of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

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A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

RYE FOR SOILING.

Crops for soiling during the early spring months, before grass is advanced; in the drought of summer, when it has become parched up; and late again in autumn, after it is injured by frosts, are beginning to be thought of as of more consequence than formerly, and considerable attention is at length directed to their cultivation. For green food in the spring, we know of nothing that comes forward so early as rye, and till it begins to head, there are few grasses more nutritious, especially for milch cows. It is important, therefore, that still greater attention should be paid to the cultivation of this grain for pasture or soiling. From the 1st to the 15th of this month is the best time to sow rye in the latitude of 40° and farther north, and we trust that every farmer will prepare at least a few acres for the early feeding of his stock. As soon as the mild weather of spring opens, cattle are sure to hanker for green food, and this is the time if it be withheld from them, that they seem to suffer most for the want of it, and thrive the least. A dry gravelly soil suits it best; but it also flourishes in thin sandy soils, and on stiff clay, when these lands are in good heart. For soiling, an extra quantity of seed should be sown, so as to ensure its coming up thick and covering the ground well. One and a half to two bushels per acre is better than less; and on stiff clay soils, where all the seed is not so likely to take, three bushels is still better. But above all, get it in early, so that it may have a good growth before winter approaches; it will then start much quicker in the spring, and make a thicker and more rapid growth.

VENERABLE PEAR-TREE.

On the corner of the Third avenue and 13th street, in this city, stands a pear-tree, planted about two centuries since by the celebrated Gov. Stuyvesant. The trunk and branches are in good preservation; the latter reaching as high as the eaves of the three-story buildings before which it stands. It has borne a considerable quantity of fruit this year, which is of a good quality. We remember having heard of older fruit trees than this existing in Massachusetts and Connecticut, but have forgotten their locality. Will any of our correspondents give us information on this head? We have a great fancy for old trees, for they are about our only antiquities; and many is the mile we have trudged for the express purpose of looking at them, and taking their admeasurements. They would make, with the circumstances connected with them, a curious chapter in American history, and well would any author be paid for writing it out.

FARMING AND GARDENING ON LONG ISLAND.

We have made several excursions on Long Island during the past summer, in Westchester county, up the Hudson, on Staten Island, and in New Jersey. There is much that is common in all these places, but we shall first speak of what we saw on Long Island, and then add such particulars as we found elsewhere less usual in its system of agriculture.

Soil.—With the exception of the low alluvial necks which jut into the sound, bays, and rivers, some wide-spread meadows, and a few narrow valleys, Long Island has not much to boast of in regard to soil; it being composed of a hungry sand, or thin gravel, encumbered by large quantities of stone and rock. Yet notwithstanding these natural disadvantages, it has been long celebrated for its productive farms, and especially its gardens; and considering the contiguity of these to market, and the high price of produce in its neighborhood, the judicious cultivation of its soil, ever since its settlement, has been a reasonably profitable business.

Fences.—These are usually of stone wall, posts and rail, or hedges. Where stones abound, and it is desirable to get rid of them, they should undoubtedly be used in preference to anything else for enclosures. The best method of making these, is to dig a trench one foot to 18 inches deep, and 3 feet wide, so that the base of the wall may be placed beyond the reach of frost. The largest stones are placed first, then those more easily handled follow, maintaining a good thickness, till it is of sufficient height. Thus built, the wall is never disturbed by the heaving of the ground; and it may last a century with very little repair, and be a good fence then. Posts and rails are quite perishable, and laid up crooked they disfigure the landscape sadly, and ought ever to be considered as merely temporary. The hedges are much more to our fancy. These are usually of cedar, and with their evergreen foliage, and fantastic interlocked limbs, they give a cheerful aspect to the country, especially during those seasons when the deciduous shrubs and trees have lost their leaves, that is quite agreeable. The cedars, however, are planted only in single rows, and too far apart entirely, and consequently form but a poor fence against small animals. If the method of planting, as given by a correspondent page 177 of this No. were adopted, there would be no trouble on this score; for the trunks of the trees soon grow so close together, that the smallest pig, rabbit, or dog, could scarcely squeeze in between them. The tops also beautifully interlace, and make walls of verdure which are delightful to look at. The native thorn, especially the maple variety, planted in the same way, makes an excellent hedge; the willow, beech, and other trees the same; still, we prefer evergreens, they so enliven the landscape, when everything else is naked and dead.

Manures.—If nature has been rather niggardly in her gifts to the soil of Long Island, she has nearly made it up by placing within its reach various inexhaustible supplies for its fertilization by art. Swamps and marshes abound, filled with rich peat and muck, which strange to say, till quite recently, have been singularly neglected, and the farmers have annually been purchasing thousands of tons of manure from this city, at an average cost of probably 75 cents a cart-load, when by draining these swamps, they might dig out their contents, add lime to them in the proportion of one to three or four, and thus make a compost equal to the best of city manure, at one tenth of its cost. Then by draining these lands, they add greatly to the health of their localities; and finally, after obtaining large heaps of the richest vegetable substance, they could turn them into cultivated fields, as fertile as any of the boasted lands of the west. The finest water meadows could also be made of most of these, at the trifling cost of merely stopping the water by flood-gates in the ditches at proper seasons, and thus overflow and fertilize them. Meadows like these would be worth $500 an acre in England, and pay ten per cent. interest on the money at that.

Sea-weed abounds on the coast, and is either carted into the barn-yards for litter, and made into compost with other materials, or spread broad cast on the land. In this way ½ to ¾ of a ton of hay can be added to the growth per acre, at a cost not to exceed $2, on meadows which are sufficiently near; and as the hay is worth on an average $8 to $10 per ton standing, it is labor well bestowed. Fish of the small bony kinds are caught here by millions expressly for manure, and great numbers were formerly spread broad cast and plowed in; but applied in this way, they become an intolerable nuisance from the fetid odor they send out when undergoing decomposition. By making them into compost, composed of six parts of peat, two of lime, and one of fish, no odor is given out, and this mixture forms a more valuable and lasting manure, than if composed of fish alone. Marine shells, salt-marsh mud, and meadow hay abound; the reader may judge in what quantities the two latter, when he is informed that Long Island has about 70,000 acres of salt marsh upon it. In addition to all these natural fertilizing sources, manures of various kinds from this city are so abundant that they can be had to any reasonable extent, and the facilities of transporting them by water are great. Then there is sand to make the clay soils more friable, and clay again to give consistency to the sands; so that after all, Long Island as a farming district, may be said to be rather eligibly situated.

Rotation of Crops.—Being so convenient to ship to the south, and to the city market, where an immense number of tons are annually consumed, hay has become the leading crop of Long Island; the land therefore is kept in grass as long as it will profitably produce it, and all other products are consequently made subservient to it. The usual rotation is, first year, plow up the sod, manure heavily, and plant with corn. It is difficult getting this off in season for wheat or rye; oats or barley consequently follow the second year, or potatoes with manure again. These are harvested in season for wheat or rye, whichever the land best suits, and stocked down at the same time with timothy. Clover seed at the rate of 4 lbs. or more per acre is added the last of February or early in March sowed upon a light melting snow.

Gardens.—In passing over Long Island, one would be surprised at the number and extent of its gardens. They are devoted to all sorts of vegetables and fruit which can be grown in this climate, and many persons have attained considerable wealth by their cultivation. Some of the seeds are sown in the fall of the year, for the purpose of procuring earlier crops in the spring, onions, spinach, brocoli, cabbage, lettuce, and cauliflower, particularly. The seeds and plants are protected during winter by covering with sedge or some kind of litter. We shall describe some of these gardens more particularly hereafter, we now advert to them for the mere purpose of mentioning one vegetable only.

Culture of Cabbages.—These are produced from forcing houses at a very early season, the main crop, however, is not set out till the last of July or fore part of August. On account of the liability of the plants to be destroyed in their early growth in the field by insects, they are sown in beds where they can easily be protected, and are then transplanted in rows; they find that this is less laborious and more certain than endeavoring to protect them in the fields. The land is made rich by a heavy coating of manure, then plowed deep and harrowed fine. The plants are set out in rows, and the number occupying an acre is from 3,000 to 7,000. They are regulated according to the size of the cabbage when full grown, as the heads will weigh from 3 lbs. to 30 lbs. each. They are supplied in immense numbers, not only to this city, but to vessels for sea stores, and are shipped to almost every port along the American seaboard, from Newfoundland to Mexico and the West Indies. One of the gardeners we visited informed us, that one year when they were very high, he netted $2,600 from nine acres, after paying all expenses of rent of land, cultivation, and marketing; and that he had cleared $1,200 on an average for the past ten years, on about the same quantity of ground. He has undoubtedly been fortunate in the cabbage culture. We know of many a farmer occupying from 300 to 500 acres of land who does not on an average clear half this amount, so that it is not the number of acres after all, so much as the crop and method of cultivation, which gives the largest profits.

It would be a curious paragraph of statistics, could the number of cabbages be ascertained which grow within a circle of 30 miles from this city. They must amount to several million heads, for the Horticultural Committee of the American Institute, reported last year upward of 600,000 in one tour they made of three miles only.

HOVEN IN CATTLE.

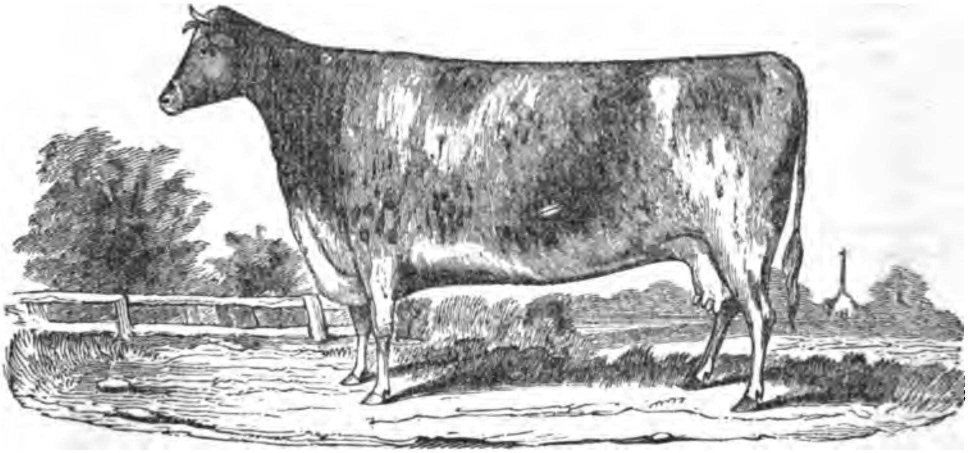
In the article in our last No. under this head, we carelessly wrote down the language of our informant, using the word "*windpipe*" instead of *gullet*, and the correction escaped us entirely in reading the proof. Any one in the slightest degree acquainted with the anatomy of animals, would recognise the mistake at once, and take our meaning; still we have thought it advisable to make the correction. The windpipe and gullet are quite different things. The former leads to the lungs, and is for the purpose of breathing, &c.; the latter leads to the stomach, and is the passage for food and drink. Should any material substance by accident get into the windpipe, and it be not immediately removed, it will cause death. A body lodged in the gullet would also cause death; 1st. by obstructing the breathing by pressing on the windpipe; 2d, by retarding the passage of blood through the blood vessels of the neck; 3d, by preventing the regurgitation or raising of the cud.

With respect to Hoven in Cattle, we gave the opinion of our informant, without intending to vouch for it. We still believe that it is usually a distention of the rumen, caused by an undue generation of gas, in consequence of an unusual quantity of green succulent food being taken into the stomach. Although we have kept a large herd of cattle for a number of years, we never had a case of the kind; for in turning them on to a luxuriant pasture, especially if it were clover, we were careful to allow them to remain but a very short time—a half hour or so at first, gradually increasing the period for a few days, when they may be left with perfect safety to graze at will.

DAIRY STOCK.

The artist has given this fine cow rather too much length of neck and body, otherwise the portrait is a pretty fair one. Apolonia was selected from the herd of Mr. Whitaker of Yorkshire, by Mr. Prentice himself, when in England in 1838. She combines the two best qualities of an improved stock, viz., giving a large quantity and good quality of milk, when at the pail, and when dried off, taking on flesh very rapidly. We do not know the quantity of milk given by her month in and out, but recollect when Mr. Colman paid Mr Prentice a visit about a year since, that he said he saw her taken up from the pasture and milked at 4 o'clock in the afternoon, and she gave 15 quarts. She had been milked as usual the morning of that day, and her only food was grass. Such cows are of great value; and our country would be much enriched if its dairy stock more generally combined the admirable milking and fatting qualities of Apolonia.

Short-Horn Cow Apolonia, Imported.—(Fig. 38.)



The Property of E. P. Prentice, Esq., Mount Hope, N. Y.

NEW METHOD OF MAKING MANURES.

The subject of increasing their store of manures, is wisely occupying much of the attention of the farmers, for they find them indispensable in an improved system of agriculture. The greater the quantity, therefore, that can be made and judiciously applied upon their lands, the more certain their success in obtaining good crops, and adding to the profits of their business. The following extract is taken from the Farmer's Mine of Wealth, or Manure and Tillage; a very valuable work by Mr. Hermance, just published by Saxton & Miles. It gives a somewhat novel method of making manure; and by strictly following it, the farmer will find that he can greatly increase his resources, and work up into fertilizing matter what has hitherto been considered mere rubbish, and greatly in his way. For full particulars, and the benefits of this process, we must refer to the work itself.

1. Form your barn-yard with a gradual descent to one side, so that the liquid formed by the rains will flow gently to that side. Make the bottom as hard and smooth as possible, that there may be little or no waste by soaking into the earth. Arrange

your stables, hog-pen, &c., in such order, as to throw all the litter and manure into the yard.

2. Sink a vat or reservoir at the lower side of the yard, of sufficient capacity to contain the juice of the yard. The most common form of the vat is six feet width by three feet depth, and twelve feet or more in length, according to the size of the yard, and the amount of liquor flowing from it. When the vat is more than twelve in length, it will be best to divide it by partitions into two or three parts, so that if at any time you want to use only part of the liquor, you can do so without any inconvenience. It will be farther desirable to have the vat so connected with the yard, that when once full, and you have commenced your manufacture, if additional rains come before you shall have completed your heap, of which we shall soon speak, you can prevent the liquid so formed from running into your vat, either by keeping it back in the yard, or by turning it in another direction.

3. In this vat mix the following ingredients as nearly as you can, without actual measurement or weight: To every barrel of liquid, add 4 lbs. of stone lime just slacked, 4 lbs. wood ashes of good quality and dry, or an equivalent of leached ashes, or a ½ lb. of potash; ¼ lb. of salt, or its equivalent of old brine; 2 ozs. of saltpetre; 20 lbs. plaster of Paris, or mud, or muck; 10 lbs. of excrements from the privy, or 20 lbs. of horse manure. Mix these ingredients thoroughly with the liquid in the vat, and if the vat contains one hundred barrels, increase the above ingredients a hundred fold. It will be well to mix these ingredients a few days before you lay up your heap, and stir them every day, but this is not essential.

On the upper side of the vat lay the foundation for the heap, by placing poles or rails, with one end to the vat, and the other extending from it, about two feet apart; on these lay other poles crosswise (precisely as we do the foundation for a stack of hay or grain), to keep the straw from the ground, and that the liquid may flow freely beneath.

5. Having everything prepared, commence laying up the heap by placing a layer of straw, weeds, stalks, or whatever you have at hand, on the foundation of poles, to the thickness of a foot. You will find great advantage from throwing the materials as you collect them, in the yard, and letting the cattle tread on them, until they are thoroughly broken and wet. When the layer is a foot thick, stir up the ingredients in the vat, and with a pail or other vessel thoroughly wet the layer on the poles. Place another layer on the first, and of the same thickness, wet as before, and thus continue until you have raised the heap as high as you wish—say from six to ten feet. Be careful at every wetting to stir up the ingredients from the bottom of the vat. The easiest and quickest way to wet the several layers, will be to use a pump or elevater, with a hose attached, to spread the liquor over the heap. In such case, let one stir, another pump, and a third manage the hose. Only be careful whatever method you pursue, to wet the several layers thoroughly in all their parts. When finished, cover the heap with the settlings in the bottom of the vat, or with anything else at hand—common earth will answer.

6. If the heap consist of straw, weeds, and the like, it will require wetting every fourth day. If you have used much peat, muck, or earth, with the straw, water once a week. To water the heap, make holes with an iron bar or other instrument in the top of it, from eight to twelve inches apart, and extending downward about to the middle; then stir the liquid in the vat, and pour it into the holes until the whole mass is saturated; finally, close the holes. At every watering make new holes.

Give the heap three waterings when made of straw, and it will be fit for use in fifteen days from the time of laying it up; when much mud or muck has been added, thirty days.

When it is desired to manufacture this kind of manure in places where barn-yard liquid can not be readily obtained, river, spring, or pond water will answer the same purpose for wetting the heaps as the barn-yard liquid, by increasing in a small proportion the ingredients for the mixture, as given in section 3, and adding them to it.

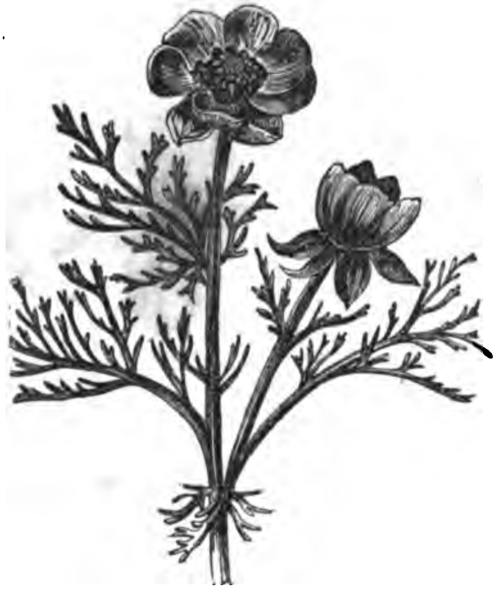
SHOW AND FAIR OF THE N. Y. S. AG. SOCIETY.

On the 19, 20, and 21 of this month, the New York State Ag. Soc. holds its Show and Fair at Rochester, and we trust that all of our citizens who take the least interest in the advancement of agriculture, and who can possibly be present, will make it a point to attend. The facilities of reaching Rochester, either by canal or railroad, are so great, and such is the cheapness of travelling, that few can object to attend on account of the distance. We are assured that the committees have made the best arrangements for the reception of animals, the display of implements, seeds, vegetables, fruits, flowers, the dairy produce, and domestic fabrics; and we anticipate that the Show this month will be the best that has yet taken place. That at Albany quite exceeded the first at Syracuse; and we have no doubt that the present one at Rochester will eclipse in every respect all which have preceded it. Recollect that agriculture is the "science of sciences," to which all others are but its handmaids. The improvements which have been made within ten years are very great—especially in stock of all kinds, with the exception perhaps of horses. We shall look for much greater improvement for ten years to come, and there is no better means of bringing it about than by associations in agricultural societies. We have given copious details of the great national agricultural meeting in England in this No., under head of Foreign News, and may our own State Society emulate its example.

In order to be able to do this, it is essential that every good citizen lends his aid.

The next most important things to be desired are the establishment of agricultural schools, and an agricultural survey by towns of the state. We hope there will be a general meeting on these subjects at Rochester, and strong and vigorous measures adopted for simultaneous action, from east to west, and north to south, for the purpose of accomplishing both these objects. A well-endowed State example-farm, with professors to teach the science of agriculture, stock-breeding, &c., we deem essentially necessary—more so than the endowment of colleges. The farmers of New York are an intelligent class of men, and understand very well the necessity and advantages of a progressive agriculture. They are entirely capable of controlling the elections, and we are confident if some of our eloquent men would place this subject in its proper light before them, not another session of the legislature will have passed, without some action on all the points we have briefly recommended.

THE ADONIS FLOWER.



(Fig. 39.)

The Adonis flower (*Adonis autumnialis*), or pheasant's eye, resembles the anemone. It grows to the height of from 9 to 13 inches, and shows a rich colored blossom during the months of June, July, and August. It receives its fable name in consequence of being said to have sprung from the blood of Adonis, when he was wounded by the boar. The name of pheasant's eye is derived from a resemblance between its dark red petals disposed around a black centre, and the eye of that beautiful bird.

RAMBOUILLET MERINOS AND THEIR PRICES.

Since our article appeared on Fine-Wool Sheep, we have had so many letters addressed us about prices, quality, means of transportation, &c., that with our numerous other avocations, we have scarcely time to reply. To save ourselves and correspondents trouble, we publish the following private letter just received from Mr. Collins which covers the whole ground. We trust that he will pardon the liberty we have taken, for we can see no easier or better way of managing the matter.

Hartford, Conn., August 21st, 1843.

Dear Sir: I observe that you have given in the July number of the Agriculturist, a notice of my flock of imported Merinos, accompanied by a cut of the imported buck Grandee. Your *written* description of the ram, does him better justice than the engraving, which I am sorry to be compelled to say is by no means an accurate portrait, and gives no just or adequate idea of his merits and peculiar appearance, unless indeed it may be, in the single particular of his *throatiness* and massive robe-like folds of skin around the neck just forward of the shoulders, together with perhaps a general appearance of stoutness and hardiness of constitution, which belongs to him in a remarkable degree. The original sketch or drawing of Grandee, (though taken by an inexperienced artist,) was tolerably faithful, but the likeness was mostly lost by your engraver in transferring it to wood.

If it is ever in my power to obtain (as I hope it will be ere long) a good portrait of Grandee, I will see that you are furnished with a copy. I only wait to meet with a competent artist, and then your numerous readers shall have the opportunity of seeing an animal, believed by experienced judges to be the *best* Merino ram ever brought into the United States. That he is of the *best breed* for *profitable* wool-growing, may now be taken as a conceded point, settled by almost unanimous public opinion, based on actual and long experience in this country; while so great is his *individual* excellence, that an extensive wool-grower of great experience, who was interested in many of the very best Merinos originally imported into this country from Spain by Col. Humphrey and others, said to me, on seeing and carefully examining Grandee, directly after his arrival from Europe, that he was "the best ram, without any exception, that he ever set eyes on," and in *his* judgment, "of more intrinsic value and of greater importance to the real interests of the country, than any other individual animal, of whatever description, then in the United States."

My object in making an importation of fresh

Merino blood at this late day, you have correctly stated in your July number. It was simply this; to establish in this country, within reach of our fine wool growers, a breeding flock of the best sort of Merinos, of *undoubted purity of blood*, which should be jealously guarded from all admixture or deterioration, and thus constitute for the time to come, a perpetual source of supply of superior pure-bred Merino bucks. All well-informed persons must agree that such rams have long been greatly needed for the improvement and renovation of the fine-woolled flocks generally, throughout the country, for the most part urgently requiring essential improvement, some in constitution, and in *weight* of fleece, others in quality of wool, all which, it is believed, can be obtained *in no other way* so well as by *returning to the pure original Merino blood.* The opportunity to do this, is now placed within reach, by the use of these rams, at a cost comparatively small, especially as compared with the cost of *importing* the blood, in doing which, I have incurred some trouble, besides the outlay of a considerable sum of money. This buck Grandee alone stands me in a net cost of several hundred dollars, at which, considering his excellence, he was indeed cheaply bought, and would readily bring the money again even at public auction, if he were carried back to Europe, though I may probably never, in this country, be reimbursed his cost.

You inform me that you have repeated inquiries by letter, as to the price at which pure-bred Merinos can be obtained from my imported flock. In reply, I would say that I have never sold any of the *ewes*, nor do I wish to part with any at present, as I would like to enlarge my own flock till it is established on a firm basis as to numbers, before selling any of the females. My whole number is now not much more than sixty. Of the young *rams*, I could spare a few, though no great number at present. As to *price*, I have never sold one for less than fifty dollars, though perhaps I should now say from $30 to $50 each, depending on their goodness. But always and only for *money in hand*, as you know I am no believer in the "credit system" in regard to such matters.

In order to try the effect of the cross of fresh blood on the American Merinos, such as they now are in the United States, I caused to be made last autumn, a choice selection of ewes from several of the very best flocks in the country, descended from the former importations, and as pure as any now remaining, which ewes were at the right season brought to Grandee, and last spring produced a very superior company of lambs, mostly bearing strong resemblance to their *sire*. These *lambs* (got by Grandee), though apart from my flock are all subject to my control, and could be furnished, both bucks and ewes, at $15 to $20 each, perhaps some at $10—in addition to which, if wanted, their *dams*, the selected American Merino ewes before named, can be obtained at any time this coming fall, after being again put to Grandee, at the price of $10 to $15 each, as to quality or goodness, which last is doubtless the *cheapest* way of obtaining a good cross of this newly-imported Merino blood. However, if the *ewes* last named, are wanted, the sooner application is made the better. They, as well as the rams, can be easily shipped by way of New York, to any part of the southern or western country, according to directions. The ewes above named bear good fleeces of fine wool, and are really very well worth having. Though not quite like my imported flock, yet they are as well bred and their blood as much to be relied on, as any of the Merinos at present existing in the country; indeed, they are doubtless of far better blood than the great majority of those which are now-a-days put forward and recommended as the best sort of pure Merino, under the name of Escurials, Paulars, and I don't know how many other great names, that in my estimation, when so applied, do not amount to much; it being now very well understood by the generality of well-informed persons, that there is at this day but few, if any (probably none) of the old Merinos remaining in the country, but what have been more or less crossed and deteriorated with either *Saxon* or some other inferior blood.

Yours truly,
D. C. Collins.

P. S. The imported buck *Grandee* is sire of *all* my young bucks and ewes. It is believed that by the use of these pure Merino bucks in our American Merino and Saxon flocks, there may be secured in the progeny an *increased weight of fleece*, to the *average* extent of at least one pound gain, per head, and generally with a *material improvement* also in *quality* of the wool. Crossed on the native or more common flocks, the improvement both in weight and quality of fleece, would of course be still greater.

THE LOCUST-TREE FOR PLANTATIONS.

This is a very valuable tree for the plantation, and we are surprised that more of them are not grown in this vicinity. They might occupy many a waste spot that is fit for scarcely anything else; but even suppose good ground is appropriated for their culture, a very handsome profit can be derived from them. A friend of ours has furnished us with the following calculation in regard to a plantation of five acres of locusts.

5 acres of land at $50	$250
Cost of seedlings	50
Labor of planting	200
	$500
200 trees might easily be grown on an acre, standing 20 feet apart, which would make 1,000 on the 5 acres. These would be worth, at a moderate calculation in twenty years, $10 each . .	$10,000
Profit at the end of twenty years, without deducting the interest on cost, &c., or adding the value of the land .	$9,500

The borer seems to have nearly ceased its ravages now, and in any event would not much injure the growth of the tree, or the value of the timber.

It is the yellow locust (robinia pseud-acacia) of which we speak. By keeping them well trimmed, they need stand but 10 feet apart, which would make 400 on an acre, and the value of the timber in twenty years would then be $20,000; or if the price of timber should fall, at least that of the first calculation above.

SOILS AND MARLS OF MISSISSIPPI.

We have received ten samples of soils from Mr. Thomas Affleck of Adams county, Mississippi, for analysis. We have been aided in their examination by one of the best practical chemists in this city, and we here give the result in brief, thinking it would be more satisfactory to the public thus expressed, than clothed in the more elaborate and technical language of chemistry. We have given Mr. Affleck's descriptions of these samples in quotation marks, so that he will be at no loss in understanding our remarks upon them.

"A. Soil of the worn lands of the Natchez country. Original growth of forest, oak, hickory, magnolia, poplar, &c."

This soil is of a yellow sandy color, and consists almost entirely of silica (sand), and alumina (clay), together with a small quantity of vegetable matter, and a slight trace of oxyde of iron and lime. The best manure for this kind of soil, is a compost, spread broad cast, of swamp muck, or peat and lime mixed—three or four parts of the former, to one of the latter. Marls that abound with vegetable matter will be found highly beneficial, and stable manures of course. Any vegetable composts made in the manner described page 164 of this No., spread broad cast and well covered with the plow, yet not too deeply, would be found highly fertilizing.

"B. Subsoil from real magnolia land."

Similar in color to A, and essentially the same, with a trifle more of alumina and lime; probably enough of the latter to make vegetable matter soluble in it.

"C. Surface soil over B. Original growth, magnolia, poplar, with a few trees of the gum, mulberry, holly, &c."

Exactly like its sub-soil B, only containing more vegetable matter, and of course much richer.

"D. Surface soil over marl-bed E."

A reddish clay, something like C, abounding with lime in nodular masses. It partakes so much of the qualities of its subsoil, as to pass under the name of marl, though we should consider it here of a poor quality.

"E. A stratum of marl varying from 3 to 7 feet in thickness, intermixed with scattered lumps of F. Under this marl is an 18-inch stratum of G."

This has a whitish clay appearance, and is poor marl, containing about 5 to 6 per cent. of carbonate of lime. It is a trifle richer than its surface soil D, and may be used with some benefit as a top dressing for other lands.

"F. Scattered lumps in E."

Good limestone, and is well worth burning.

"G. An 18-inch stratum under E."

A fine white sand with a slight trace of alumina. It possesses no fertilizing properties. Would be beneficial spread broad cast on stiff clay soils and plowed in, thus making them less adhesive to work.

"H. A stratum—how deep I did not examine. It is mixed with layers like G."

Essentially like F—a good limestone. Whether it will pay for burning and transporting the distance spoken of, must be ascertained by making the experiment.

"I. A singular-looking clay."

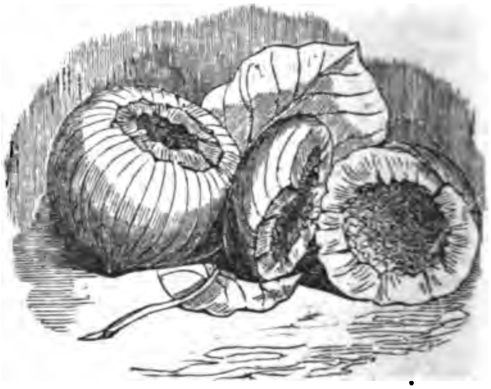
Essentially like G, with a slight addition of oxyde of iron, which gives it the singular yellow color.

"No. 1 from bed of marl at Ingleside."

This is good marl, containing as near as we can guess, full 20 per cent. of lime. It effervesces strongly in muriatic acid, and will make an excellent top dressing for the plantation.

If we find a good practical chemist willing to go to the south on the terms proposed, we will give the information.

THE SYCAMORE FIG.



(Fig. 40.)

Since we have been able to acclimate the common fig of commerce, we should think it would be equally easy, if not more so, to grow that of the sycamore. The tree which bears it is the sycamore (ficus sycamorus) of Palestine, a very different species from that known under this name in America. This tree would be a noble appendage to the park, and when properly cultivated and ripened, the fruit is pronounced palatable and healthy.

BEST TIME FOR REMOVING STOCK TO THE SOUTH.

This and the three following months is the best time of the year to take domestic animals from the north to the south. Removed in the fall, they stand a much better chance of getting acclimated without loss; they also endure the heat of the following summer better than if wintered at the north. They should be taken there in moderate condition, and be carefully kept so the first year or two—horned cattle especially. They must be stabled at night as well as during the heat of the day, for the dews are as injurious to them, and perhaps more so, than the fierce vertical sun. The average pulse of the ox is about forty in a minute at the north, while at the south it increases to seventy or more, and rises upon excitement to eighty—just double what it is here. This is a very important change in the arterial system, and if the animal be loaded with flesh, he is much more liable to disease and death. Valuable Durham bulls have died soon after arriving at the south, merely because they were in too high flesh when taken there, and foolishly kept so for the purpose of making a better show.

AGRICULTURAL SURVEY OF THE STATE.

We find the following announcement in the August No. of the Cultivator, respecting an agricultural survey of the state. We think that the different kinds of crops, their rotation, and the domestic stock of the country, should be noticed as well as soils, &c., otherwise the survey will be quite incomplete. Dr. Emmons, we understand, is well qualified for the undertaking, and we hope that all possible facilities will be rendered him to make his survey as perfect as possible. We would suggest to Dr. E. if he expects the agricultural press to give full notice of the survey, that it would have been quite as well to have forwarded each paper a circular to that effect. It was by mere accident that our eye caught the announcement, for we have something else to attend to than looking over every paragraph of our numerous exchange list; the labor of this alone would fully occupy the time of three persons. For one we must say, that whatever it is expected we shall notice hereafter, our attention must be especially drawn to it by an *original* communication, or it must be *marked* for publication.

To Agriculturists.—Dr. Emmons, who has heretofore been engaged in the geological survey of New York, is now employed by his Excellency the Governor, under the act of last winter, in making an agricultural survey. He proposes, if possible, visiting each county before the close of the season, for the purpose of making such observations in this department of the survey as shall serve to promote the great object of agriculture. The collection of soils forms a part of his duties. Observations on drainage; the influence of slope and exposure on late and early vegetation; the extent of drift; the distribution of the mineral manures, as peat, marl, limestone, &c., and the extent of the different agricultural divisions or regions, are prominent objects of the survey. To assist in this work, farmers are respectfully solicited to collect specimens of soil, and transmit to Albany, by private conveyance, if possible, for the collection now in progress. Let the specimens thus transmitted, be accompanied with a description of the rock, subsoil, slope, mode of cultivation, &c., &c., and such remarks as are essential to a correct knowledge of their true nature and condition. Agricultural statistics in all the departments of husbandry are respectfully requested, and a communication of facts which may be deemed important to the promotion of husbandry in New York; also the collection and transmission of those insects which are injurious to vegetation. The soils, when it is important, will receive a chemical examination, as soon as possible after the field work is completed.

A co-operation in this work is highly important, in consequence of the limited time which has been assigned for it.

NEW YORK FARMERS' CLUB.

The meetings of this Club will hereafter take place on the Second Tuesday of each month, at the hour of 12 M., at the Reading Room of the Depository of the American Institute in the Park. They are *free to all*, and there is no ceremony attending admission, or pecuniary charge whatever to any one frequenting them, either expressed or implied. Gentlemen from the country, and strangers in the city are particularly invited to attend. It is desirable for our gardeners and farmers to bring anything curious or extraordinary in the way of fruits, vegetables, grain, or flowers, for the inspection of the members. The topics of discussion are various, and no one interested in agriculture can fail to be pleased at these unceremonious monthly meetings.

The third monthly meeting of the New York Farmers' Club took place on Tuesday the 15th August. General Philip Schuyler, late Consul to Liverpool, took the chair, and a body of between forty and fifty farmers and gardeners were present from this and the neighboring counties. There was quite a display of fruits, flowers, and vegetables, upon the table, brought in by the different members, among which we noticed Victoria Rhubarb from Mr. S. A. Halsey, a dozen stems of which weighed 16½ lbs., and a single leaf measured two feet two inches in length, by two feet seven inches in breadth; also a Nectarine, fair and delicious to look at, measuring seven inches in circumference. Mr. S. Stevens presented a specimen of the Pear of Japan fruit (*Pyrus Japonica*), Madeira nuts, Okra, and a basket of choice pears. Mr. A. P. Cummings, Egg-plants of curious shape, one of which weighed 3 lbs. 14 oz. Mr. Nicholas Wyckoff, handsome specimens of the Red-cheek pear. Mr. Muir, the flower called Ladies' Slipper of very great beauty. Mr. Meigs, the Paper Mulberry (*Morus Papyrus Fructifer*), an uncommon production. Other fruits were tolerably abundant, but we did not learn the names of the parties presenting them. Certain it is, the way they were demolished by the different members, after a proper introduction and lecture upon their merits, was a pretty fair test of their excellence.

Mr. Stevens, chairman of the committee appointed to visit Mr. Steele's grape-vines, made a verbal report upon them, approving of the manner in which they were cultivated and pruned.

Grapes for Wine.—A discussion then arose as to the value of grapes grown in America for making wine. Mr. Stevens remarked that to the best of his information, no wine was made in the United States without the addition of sugar, and it was remarkable that the grapes, figs, and small fruit of our country would not dry exuding sugar, which was the more singular when we consider the saccharine matter in the sugar-cane, corn-stalks, beets, pumpkins, and especially the sap of the sugar-maple, growing in America.

Mildew on Grapes and Gooseberries.—It was asserted that horn shavings and charcoal applied to the roots, had been successful in preventing it.

To prevent Grubs from destroying Cabbage-Plants.—Dip the plants in common fish-oil when about to be transplanted, and the grub will not touch them. Oil accelerates their growth. In setting them out, Mr. Meigs thought the best plan was to make a hole one foot deep, then put in the plant, then sift a little dirt and make it into mud, turn the plant around a few times, by that means the fibres of the roots took their natural position in the ground and grew rapidly.

Baden Corn.—Mr. Thorburn found it would not ripen so far north as New York.

To Kill Insects on Trees.—Mr. Stevens recommended smoking them with tobacco or sulphur; the smoking to be repeated every two weeks; an infallible remedy. A moveable furnace recommended to be used.

The Madeira Nut Tree.—One fifteen years old will produce about three bushels of fruit this season. The nuts are far superior to those imported, being fresher and sweeter.

Exchange of Grafts was proposed and adopted; specimens to be left at the American Institute.

Considerable general conversation took place, after which the club adjourned at 4 o'clock P. M., to meet at 12 o'clock, M., on the second Tuesday in September, at the Reading-Room of the American Institute, to which the friends of agriculture are invited to attend. These meetings are becoming more and more interesting, and will undoubtedly be the means of effecting considerable good. The intercourse among the members is free and unconstrained, and aside from the regular discussions, much valuable information is imparted and obtained.

DIRECTORY FOR SHOWS AND FAIRS.

We had prepared quite a list of these for this month, but it has unfortunately got mislaid. Our friends have been somewhat remiss thus far in forwarding papers containing the notices of their several meetings.

New York State Society, Rochester, N. Y., 19, 20, 21, Sept.

American Institute, New York city, commences 10 Oct., and continues two weeks.

Orange co., Goshen, 4 Oct.

Cayuga co., Auburn, 11 and 12 Oct.

Cortland co., 4 Oct.

New Haven co. Ag. Soc., Conn., 27 and 28 Sept.

Hampshire Franklin and Hampden Society, Northampton, Mass., 18 and 19 Oct.

Philadelphia Ag. Soc., Philadelphia, Penn., 4 and 5 Oct.

Franklin Institute of the State of Penn., Philadelphia, 17 to 28th Oct.

TO THE FARMERS.

Our article under this head, in the July No., was misapprehended by some of our friends. We were not pleading in that for ourselves, but for others. It is very true that we should be glad to see our subscription list increased; still, in this respect we have nothing to complain of, for it is already large—larger than ever before—and is steadily and rapidly increasing. July and August past, have been two of the best months yet, in the matter of subscriptions. At the present rate of progress we shall commence our THIRD VOLUME with as good a subscription as that of any agricultural journal that has ever been published in the United States. It is our intention not only to *deserve success*, but, by the blessing of Providence, to *obtain it.* Three months since we were called upon for a *second edition* for Vol. I., this is completely exhausted, and we are now printing the THIRD edition. This is certainly encouraging, and leaves us no cause of complaint. To those who have so kindly and actively volunteered in our behalf, we return our grateful thanks, and hope that their exertions will still be continued. A greater good can not be done than by the dissemination of well-conducted agricultural journals.

Ayrshire and Yorkshire Cows.—Referring to the advertisement of these fine animals, we can only say, that we are assured they are well bred of their kind, and approved good milkers, and will be sold very low, as the owner is about to dispose of his farm. They are near the city, and can easily be seen. For further particulars address the editor of this paper.

Guano Manure.—All know that this is the excrements of birds, found in large quantities on the islands of the Pacific. Now flamingoes, pelicans, and other birds, congregate in great numbers on the Florida keys, and have undoubtedly left their excrements there. Can any one inform us whether in sufficient quantity to make the manure easily procured, or worth transportation to the main-land?

Salt as Manure.—In the interior of France 300 lbs. of salt are esteemed equivalent to 3,000 to 5,000 lbs. of plaster, for manuring land.

Large Grapes.—Bunches of grapes have been produced in New Orleans, this season, weighing 6 lbs.

To Horticulturists.—It is particularly requested that the horticulturists of Boston, Philadelphia, Baltimore, and other places, be present at the ensuing show and fair of the American Institute, next month, with specimens of the products of their gardens, especially in the way of fruits and vegetables.

Sale of Sheep.—We would call the attention of those wishing to purchase South-Down or Long-Woolled sheep, to the advertisement of Messrs. S. & J. Wait. They have been importers for several years from some of the choicest flocks in England, and they unquestionably possess a fine lot.

Great Sale of Wool.—We understand that the Messrs. Morrell of Tompkins county, have sold their present year's clip of wool for 50 cents per lb. Their flock is of the Saxon blood, 2,000 in number, and averages 2½ lbs. per fleece. We should think $2,500 a pretty good sum these times for two farmers to finger for their clip of wool alone. Last year they obtained only 42½ cents per lb.

Improved Durham Short-Horns.—We respectfully suggest that this very long name may be dropped, as it now generally is in England, and that the race of cattle to which it is applied, may hereafter be simply designated as Short-Horns, or Durhams—either word is sufficient.

Feel of Cattle.—Pray, gentlemen, use the proper technical term *handle;* and instead of exclaiming, such an animal is "a good feeler," or "feels well," say it is a "good handler," or "handles well."

Out of.—This term is improper, applied to a male; but proper, applied to a female. Say "got by," or simply "by" such a male; "out of" such a female.

Sired by, also, is improper. Animals have dams as well as sires, and the eccentric John Randolph, without intending in the slightest degree to be profane, said that one might with as much propriety write "damned by" as "sired by." It would be perfectly proper to say of any domestic animal thus; Rudolph, sire Rolla, dam Kate; or what is better; Rudolph, got by, or by, Rolla, out of Kate, or *vice versa.* These may be called small matters to criticise, yet when one can as easily speak correctly, it is better to do so.

New Haven County Cattle Show, Agricultural and Horticultural Exhibition and Fair, and Plowing Match, to be held at the city of New Haven, Ct., on the 27th and 28th September. We would call especial attention to the above meeting. The town is one of the most attractive in this vicinity of itself alone, and the beautiful scenery around it—and then the show and fair! Why last year they had *one thousand and twenty-six* working oxen on the ground, all of a deep, glossy red, making a team of one mile and three-fourths long, as *one item* of the show. New Haven county, in the breed of its beautiful red cattle, may be called the Devonshire of America. It is our intention to be there in full force, for one, and all may be assured of a kindly welcome. The town is easily accessible by land or water —travelling cheap, and especial enjoyment in store.

The New England Silk Convention will hold its second annual meeting at Northampton, on Wednesday, October 4th, at 10 o'clock A. M.

Great Sale of a splendid lot of Durham Cattle, Hereford Bulls, and South-Down sheep, at Mr. C. N. Bement's, Three Hills Farm, 13th of this month, 10 o'clock A. M.

☞ Remittances for the Agriculturist.—Where good bank-bills are not to be had, post-masters will remit in gold coins; or for a single copy, silver can be sent in twenty-five-cent pieces, carefully pasted in the letter.

☞ We are more generally in our office at from eight to ten o'clock, A. M. Those wishing particularly to see us, will be more certain of finding us by calling at those hours.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

PLOWS FOR THE SOUTH.

Ithaca, *N. Y.*, *July* 23*d*, 1843.

Dear Sir:—Please to say to your southern readers, that I am getting up patterns for a small one-horse plow, on the Barnaby and Mooer principle, on purpose to meet the wants of the south. I think my observations, in a tour of 2,000 miles through the heart of their country, will enable me to get them up a plow more generally useful than anything they have yet had, and at the same time come at a low price. Any of your friends ordering them through you, will be supplied at $5 each, cash, delivered in the city of New York. Extra points, 5 cents per pound, if cast; if wrought, they can be made on the plantation.

E. Cornell.

For the American Agriculturist.

MILKING QUALITIES OF DURHAM COWS.

Troy, *July* 17*th*, 1843.

Dear Sir:—The following statement I am induced to communicate, to show the value of Durham stock for dairy purposes. A gentleman in this vicinity is the owner of two cows only; one a full-blood Durham, seven or eight years old, and the other a four-year-old, seven eighths Durham heifer. He informs me he kept an accurate account of their produce in milk and butter for thirty days. The result was as follows: 108 lbs. of butter, besides supplying a family of five persons with new milk and cream for ordinary family use, and nine quarts of new milk daily for a calf. The average weight of milk per day, from the oldest cow, was 68 lbs., and from the heifer 60 lbs., during the thirty days. One of the cows the gentleman purchased from the writer of this article. This statement may be relied upon as substantially correct. The cows were kept on *pasture only.*

This experiment was made at the suggestion of a brother of the owner of the cow, who resides at the east, when he was visiting at his house, as he had doubts as to the superiority of Durhams over the native stock for the dairy: the result satisfied him that he was mistaken.

Geo. Vail.

On this same subject, Mr. E. Cornell writes us from Ithaca, under date of July 23d. We wish, in all cases, that the breed of the animals could be given us as near as possible.

There are some large stories going the rounds of the papers, on the subject of cows that give large quantities of milk.

Judging from present indications, the premium offered by our society on the subject, will bring to light some valuable cows in this county. There are three that I have some accounts from already, as follow:—

Judge Walbridge, of this village, has a cow that gave $395\frac{10}{16}$ lbs. milk in 7 days, ending 24th June last; average 56½ lbs. per day, or 28½ quarts per day. Some days she has given $61\frac{5}{16}$ lbs. per day. Her milk weighs 2 lbs. per quart. She has made $2\frac{1}{16}$ lbs. butter per day, with 2 quarts of her milk taken out for the use of the family.

Rev. Wm. Wisner has a cow that made 47 lbs. butter in May, and supplied two families with new milk for daily use during the time.

Geo. P. Frost, Esq., has a cow that has made $2\frac{7}{16}$ lbs. butter per day, from 16 quarts of milk. She gives a small quantity of milk, as you will see; but it is extraordinary in richness. All the above cows were running on good common pasture, with occasionally some light slops. Mr. Frost, at my suggestion, has commenced feeding his cow a little extra, to see what she will do. I judge by appearance, that the three above cows are a cross between the Devon and native—native blood predominating. We have some fine cows with a sprinkle of the Durham blood, which I trust will be heard from in due season; and if they are not misrepresented, they will acquit themselves handsomely.

E. Cornell.

For the American Agriculturist.

CULTIVATION OF COTTON.—No. V.

Log Hall, *Miss.*, *Aug.* 2*d*, 1843.

In No. IV. I gave the preparatory steps to gathering our snowy staple, much of which is too often neglected until absolute necessity forces preparation. Having all things ready for picking cotton, I commence as usual early, as soon as the hands can gather even 20 lbs. each. This is advisable, not only in saving a portion of that from being destroyed, if rains should fall, which often do at this season (about the middle of August), but for another reason; passing through the cotton has a tendency to open out to sun and air the limbs that have interlocked across the rows, and hastens the early opening. On low grounds, especially, much loss is incurred in some seasons from the want of the sun to cause an expansion of the fibre within the bowl, so as to cause it to open. The bowl is composed of five divisions, in each of which there is a parcel of cotton wool surrounding each seed, there being several in each *lock* of cotton. When green, these fibres lie close to the seed, and as it ripens, the fibres become elastic, the bowl becoming hard and brownish. The Sea Island has only three divisions, as also the Egyptian, which is only the Sea Island of the best variety, with black seed, smooth, and a yellowish tuft of fibres on the small end; they are both from Pernambuco. Some of the cotton we plant has only four divisions, but I think five generally.

There is a peculiar art in gathering the cotton from the bowl, which, like handling stock, can only be acquired by practice; many gather equally fast with either hand. The left hand seizes the stem near the open bowl, or the bowl between the two middle fingers, the palm of the hand up; the fingers of the right hand are inserted tolerably low down in the bowl, a finger on each lock of cotton; then, as the fingers grasp it, there is a slight twisting motion, and a quick pull, which, if done well, will extract the contents, the bowl being open, and the bottom of the locks not gummy to adhere. There is a vast difference in hands—not the quickest making the best pickers—a steady, clocklike motion, with some quickness, is necessary to gather fast. A neighbor of mine, when a young man, some ten years since, gathered 400 lbs., which was at that time the best I had known; this has been beaten since, by aiding the hand in emptying his sacks, and almost feeding and watering him while at work.

I weigh twice a day, at noon, and again at night. I never allow picking after dark, unless the hands take a very industrious fit, or run races; they are then indulged. Not unfrequently is this the case, although the same hands have picked together for years. They will try to outstrip each other, as is often seen with the horse, and evince as much anxiety to hear the weights, and appear as chop-fallen at being beaten, as if it were the first they had ever received; trying again the next day with no better success, and even endeavoring to steal out into the field before their competitor is aware of it.

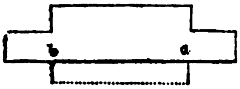
After weighing, if the weather be fair, the cotton is consigned to the scaffold, to the care of those who pick out what trash and rotten parts are left. After being dried as said in the last No., it is taken into the upper part of the house, and placed over the gin-stand, ready to be turned into the hopper that leads from this place to the gin-stand. My gin-house is 32 by 62, framed, with two floors. Below the first floor is the running-gear, where the horses work; in the second story we weigh; on a level is the shed for sunning, fronting the south, in which is the gin-stand at one end; at the other the press. In the garret is carried the seed; cotton over the gin-stand, and the ginned cotton over the press.

I never pick cotton if wet with rain, but attend to other matters. When the weather is good, I strive to keep every one busy that can gather anything like even a half-hand's work. All go out after daylight, but not long, I assure you; when, I can not say, as my manager has that part to attend to, for I never could think it agreeable to be out so early.

When I commence ginning, there is a small boy to drive each team, there being four horses, or mules, to work in pairs; one hand at the gin-stand, who is kept pretty busy in putting the seed-cotton on to the saws; another hand is required to push the cotton back from the flue of the gin-stand, rake cotton into the hopper, and clear out seed and motes after the gin drops them. With my gin-stand, I have myself ginned 4 bales per day, and averaged over 3 bales for a week together; but it requires constant attention. Though the labor is light, yet it requires a good hand to perform it. There is much loss-work in this business, frequently a part of the saws are running through seed, while others are almost choked; again, the roll is not full; again too full. In this way my ginner, though an excellent servant, and named after Cyrus of yore, is sometimes busy ginning out 2 bales, or even less per day, while I, though naturally lazy, and not disposed to thwart nature in that prerogative, never gin under 3 bales. The plan is to keep the team steady, and shake the cotton regularly over the roll, so as to keep the roll regularly full. I call the *roll* the cotton in the gin-stand that is turned over and over by the motion of the saws, from which the saws pull off the article known in commerce as cotton.

The next and last thing is *baling*, which I do by cutting off several pieces from a bolt of bagging, about 4 feet 6 to 8 inches long, the length of the bale being 4 feet 6 inches; I then cut out the bed-cloth, so as to have the heading of each end on it, without wasting, which is done by splitting the first end long enough for head, say 2 feet 9 inches to 3 feet, and cut off one piece; then measure the length of the bale, cut half across, and split the same distance as their end, and cut one end from the bolt (leaving one half attached to the bolt), so as to have both heads on the same side of the cloth thus. I then split in two one of the first-named pieces, and sew on to the side from *a* to *b*; this gives the bed-cloth; the two pieces each side of the long middle piece, when cotton is pressed down, serve as half the sides of the bale; the first-named cloth being placed on top of the cotton before pressing, and turned down, is met by these half sides, and when sewn up, covers the bale; the bed-cloth is lain smooth and even on the bed-block, and the doors of the press fastened over it, when the press is full; one of the first cloths cut, called top-cloth, is stretched under follower and on cotton. My press is a single-screw, inside press; the horse walking adjoining to the walk of the teams, working the running-gear of the gin-stand. The bale is pressed above them on the first floor, and the cotton is put in the press on the upper floor. Four hands, or rather three hands and a youngster do the pressing; two getting in the box and tramping the cotton down, while the youngster throws in the cotton, and the fourth sews in the head, and prepares a bed-cloth. We press 9 to 10 bales a day, averaging generally 425 lbs., preferring about that weight to any other.

(FIG. 41.)



After running the press down, one hand is employed in tying, while the two others wind up the rope on a windlass, to make it tight round the bale, having grooves in the bed-block and follower large enough for rope to pass through easily; one hand has a long needle, three feet long, either of white oak or iron wire, through the eye of which is passed a piece of twine, the ends tied together; a loop is formed, the rope passed through and made fast; the needle is then passed through the upper groove by one hand, another pulls through the opposite side, he then returns it below; the hand that ties pulls through, releases the twine, makes a knot in the end of the rope, passes it over the rope attached to the coil, and makes a single knot; the long end then is passed over a pin in the shaft to which the windlass is attached, then this is turned over and over until tight, the rope cut, and passed under the rope on the bale, sometimes tied, as if knitting a line on to a fishing-hook, and so on until the ropes are all tied. Mine are eight in number; seven, however, are an abundance. Having one bale out, is sufficient to show you.

Now I am done, and right glad of it, as I fear your readers will be. I have been obliged to be particular, thinking unless the detail be so minute as to be comprehended by any one, it would not meet your wishes. I hope that my little labor will answer the ends for which you desired it. On some points I have not touched—the machinery and gin-stand; and I ought to have passed the pressing, as my press is far behind the present improvements; but I hope yet to furnish you with all that, though I can not promise, for without engravings it is difficult to explain.

M. W. Philips.

For the American Agriculturist.

MARYLAND FARMING.

Davidsonville, Md., July 20th, 1843.

Dear Sir: The district in which I reside, is in Ann Arundel county, 33 miles south of Baltimore, and 10 west from Annapolis, between the Patuxent on the west, and the Chesapeake bay on the east. The good land commences at the head of South river, and runs south about 20 miles, with an average breadth of about 7 or 8 miles from the Patuxent to the bay. These lands were originally of great strength, producing every variety of timber of the largest growth. Many trees still remain of great size; oaks 6 to 8 feet in diameter, poplars 4 to 5 feet, chesnuts the same, hickory, beech, elms, and maple, all grow luxuriantly, and in abundance. The surface of the land is gently waving, and all the hills are about the same level, which gives the surface in the distance the appearance of prairie-land. The soil is alluvial, composed of sand, clay, and vegetable mould. Green sand marl is found in many places, and is in different degrees interspersed with the soil. Forty to forty-five feet below the surface, a bed of shell-marl is always found about 15 feet thick, composed of every variety of shell, large and small.

This beautiful country has been cultivated from the first days of the emigrants, to within 20 years ago, by tilling the same fields with the same produce, or a simple alternation from wheat or other small grain, to tobacco or corn, without any effort to restore strength by manure or rest. Of course the land degenerated, and finally produced not more than 3 or 4 barrels (15 to 20 bushels), of corn, 5 or 6 bushels of wheat, and 5 or 6 hundred weight of tobacco to the acre. About 20 or 25 years ago, a few intelligent gentlemen commenced the system of planting and clearing and an alternation of crops; and soon the earth began to give forth its fruits anew, producing 20, 25, or 30 bushels of wheat, 8 to 10 barrels (40 to 50 bushels), of corn, and 1,000 to 1,200 lbs. of tobacco to the acre. Others soon followed the example, and now nearly the whole district is renovated, and fairly under this system.

The plan is simply to take an old field exhausted and overgrown with small pines, sassafras, chesnuts, &c., &c., grub clean, and put into corn. The yield, under the most favorable circumstances, will be about 20 bushels of corn the first year. It is then put into small grain, and sown to clover the following spring; at the same time, plaster to the amount of a bushel to an acre is applied later in the spring. This crop will not amount to more than 6 or 8 bushels of wheat, and if other grain, in proportion. The clover is not grazed this year, but carefully preserved. The following year the first crop of clover is cut for hay in June, the second crop is turned in about August, and seeded with wheat about the 15th or 20th of September. Sometimes the planter prefers reserving this fallow for his corn or tobacco; this depends on his land, his force, and perhaps on the prices of different produce. I should have stated that plaster again, to the amount of one bushel to the acre is put upon the clover early in the spring; in fact plaster is applied to everything, to the grain, to the young corn, and tobacco, in the hills soon after planting, and even to the fields that are uncultivated, when used for pasture.

The crop, whatever it may be, will now show the effects of the clover and plaster. The wheat will be about 10 to 12 bushels to the acre, or 35 to 40 bushels of corn, or 800 to 1,000 lbs. of tobacco. The next year this field goes into tobacco or corn, and then again into grain, then clover, and so on. The second process of clover will cause the land generally to produce about 20 or 25 bushels of wheat, or 10 barrels (50 bushels), of corn, or 1,000 to 1,200 lbs. of tobacco, according as the one or the other may have been cultivated.

Our farms are divided into 4 fields, for corn, small grain, tobacco, and clover. Our fences are not all permanent, so that the fields are enlarged or contracted at pleasure, according to the cultivation. On a farm of 500 acres, the common size here, there would be about 150 acres in wood, 30 to 50 acres in meadow, stable-yard, garden, and the grounds about the house; and 4 shifts of about 70 acres each. On such an estate 20 hands could be employed; say six men, six women, four boys, and four girls. From this farm, 50 to 60 hogsheads of tobacco, 1,000 to 1,200 bushels of wheat, and 500 barrels (2,500 bushels) of corn, besides oats, clover, hay, timothy or rye, potatoes, &c., &c., can be, and is produced. It is found by those who commenced this system of improvement 20 or 25 years ago, that their lands are at a stand, and even that they produce less than the lands now going through this process of cultivation. Such persons are consequently turning their attention to the use of lime, and in every instance where time has elapsed sufficient to test its effects, they have found the greatest advantage in it. This article has heretofore been too dear, but the present price will enable all to obtain it in the course of time. Eight cents a bushel for slacked lime is the price now, and it will be lower.

Such is the productiveness of our soil, with the worst of all labor, that of slaves; and I have no doubt from what I have seen here on a small scale, that if our district were divided into farms of from 100 to 150 acres, farmed by an industrious and intelligent set of white men, that the land would produce double the present result. The black laborer having no interest in the country, and by nature more lethargic than the white man, does no more than he is compelled. He has no thrift, no economy, no invention, and consequently we lack that which is so conspicuous in the north and east, neatness and method. I have known on a lot of 5 or 6 acres, 18 barrels (90 bushels), of corn produced to the acre, and wheat in proportion.

Land here is cheap, the most highly improved with all the needful buildings, may be had from $50 to $60, and unimproved, for $20 to $30 per acre. Markets are near and good, and conveyance of produce easy, and at low rates. The whole country healthy except on some of the rivers and creeks; but generally, the good land in question is on a ridge midway between the waters above named. To the south of this district, lies a similar tract of land, of the same character, not yet improved, that could be purchased on lower terms.

R. S. Stewart.

For the American Agriculturist.

DURHAM CATTLE AND SOUTH-DOWN SHEEP.

Kirkleavington, near Westchester, Westchester Co., Pa., 7th month, 1843.

Respected Friend: Although I have so long neglected, yet I have not forgotten my obligation to give thee some account of the stock which I brought from England in 1839. It is well known that first-rate animals are quite scarce in England, and that they are worth more there than in this country is obvious, for two reasons; first, because the market for meat is much higher, and second, there are too many more independent and spirited breeders who will not buy a *middling* animal to breed from, when they can get a *first-rate* one.

Many people are disposed to scoff at the idea of *pedigree, handling, &c.* I have heard of the owners of large landed estates, who frequently offer considerable premiums to the person who would find a weed growing thereon; now suppose some of us had our farms clear of all kinds of weeds and their seeds, and some one would sell us some kind of valuable seed, among which there was the seed of some pernicious weed, but which was so small that an inexperienced eye could not detect it; again, suppose we had a fine herd or flock of pure bred animals, in which it had been as rare to see much imperfection for many generations, as it is to see weeds on some farms, and some one was to offer to sell us an animal whose appearance pleased us well, how could we know that there was no impure blood in it without referring to pedigree? In the case of the seed there is an opportunity of seeing, and although our country people are so sharp-sighted, I have known them to be deceived, and to sow the most pernicious of seeds. Now what I have the most to lament over in these days, is the deceptions which I believe have been practised in the sale of inferior bred animals to our *inexperienced breeders*, who I fear too often, in order to supply the want of real excellence, as nearly as they can in their produce, endeavor to make it up with an extra portion of feed, so that in some instances it is like tilling a poor soil, the expense of culture costs more than the crop is worth.

I have been highly gratified to learn by thy visit to Wiseton, that Earl Spencer has an aversion to showing his best animals at exhibitions, because he believes it to be injurious to *stuff* and *fat* them as is usual on these occasions, and he does not choose to exhibit them in usual condition to compete with those in such high condition; now if in England, where the art of breeding is best understood, and where animals are judged of by their real excellence, it will not do to show them in usual condition, well may some of us object to it in this country, where they are only judged of by the eye.

Thee is aware, that Thomas Bates, of Kirkleavington, was the breeder of my bull Yorkshireman; he is by the same sire as Cleveland Lad—Short-Tail (2621). I have never shown him at any exhibition, for precisely the same reason that Earl Spencer objects to showing. He will be five years old this month, and is now in good condition. When I visited Kirkleavington, T. B. had three bulls near about the same age, under one year old. When I asked the price of one of them, he inquired which one I preferred, I told him, he said 100 guineas was the price; and as I soon discovered he had but one price for them, I gave his asking. When I returned to Liverpool after the Oxford meeting, I met with J. Etches, who then resided there; he told me he had bought one of the other two at the same price, which he afterward called Locomotive, and which he since sold to E. Letton of Kentucky, for a handsome advance. My cow Donna Maria, was bred by W. F. Payley, of Gledhow, see 3d Vol. Herd-book, page 476. She is not of so good stock as Bates', and I think likely there is but little in England equal to his Dutchess family. Donna Maria brought twin heifer calves last winter.

As regards the Downs, I scarce know what to say of them, after seeing the admirable account which thee gave of those thee selected for F. Rotch and others. As soon as I saw the No. of the Cultivator that contained it, I forthwith sent it together with a letter to J. Ellman, of Glynde, of whom I had purchased one buck and two ewes, to know how it was that Webb had so far succeeded in carrying off so many prizes. To this he soon replied in a letter, stating that he had not shown anything at the last Royal Agricultural Show, but that Mr. Webb was justly entitled to all the prizes which he took.

I now have the buck and five of the ewes that I imported, and I fancy their produce is no discredit to them; though I would of choice had fewer males and more females. I have now about 30 all pure bred, having some time since sold all my grades, among which there was one ewe now owned by John Worth, near Marshalton, Chester county, which I do not hesitate to say, for beauty and justness of form, surpasses any sheep of any breed that I have ever seen. My flock this year averaged within a fraction of 3 1-4 lbs. each, after having been well washed in the river Brandywine.

I have been for some time in the practice of having the wool manufactured into cloth, and found that I passed quite well with it even in England,

and to the credit of "Honest John," I now say it, that I think his subjects are less disposed to judge men by their cloth than some other people, having long believed the saying, that "'tis not the dress that makes the man," and now having five boys to clothe, I find it quite convenient to breed such sheep as produce wool sufficiently fine to clad any practical farmer. I like the South-Downs much better than any other breed of sheep that I have ever bred, and I have not, for the last forty years, failed to breed a small flock every year. I have had the Irish, Leicesters, and some few Merinos. The first two I liked well until I obtained the Downs, and began to wear a domestic coat, and now I think their wool scarcely fit for stockings. Were I to make a business of growing wool, I should most certainly cross the Down with the Merino, by which means I could increase the weight of the Merino fleece sufficient to make up for the wool not being quite so fine, and then have a much more profitable sheep for the butcher, besides a much better constitutioned animal. Respectfully thy friend,

Joseph Cope.

For the American Agriculturist.

VIRGINIA LANDS.

Washington, D. C., August 4th, 1843.

Dear Sir: I am thus far on my return from an exploration of that part of Virginia, lying within a circuit of 50 to 100 miles from this place, and do not hesitate to say, that considering its advantages as an old country, it is much to be preferred for settlers from the north, than any part of the west with which I am acquainted. Lands can be had here, that are really quite eligible, from $5 to $15 per acre; and though apparently poor and exhausted, there is abundant material close by for renovation. I shall give you details hereafter, not having time now. Our company have about concluded to settle at ——, but more of this anon. Wheat and other grains have proved a good crop; corn looks well now, though it has suffered some from the drought. Yours sincerely,

G. A. C.

We are quite obliged to Mr. McLean for the following designs of his farm-gate and road-scraper, and shall look for the promised subsoil plow with interest. We shall give it an insertion in our paper as soon as received. We have seen a great variety of farm-gates, but we find nothing superior or more simple than the design of Mr. McLean. We are informed that it *does not sag*, the great width of the top piece *c* at the swing-post end, and the single brace *d*, effectually preventing this.

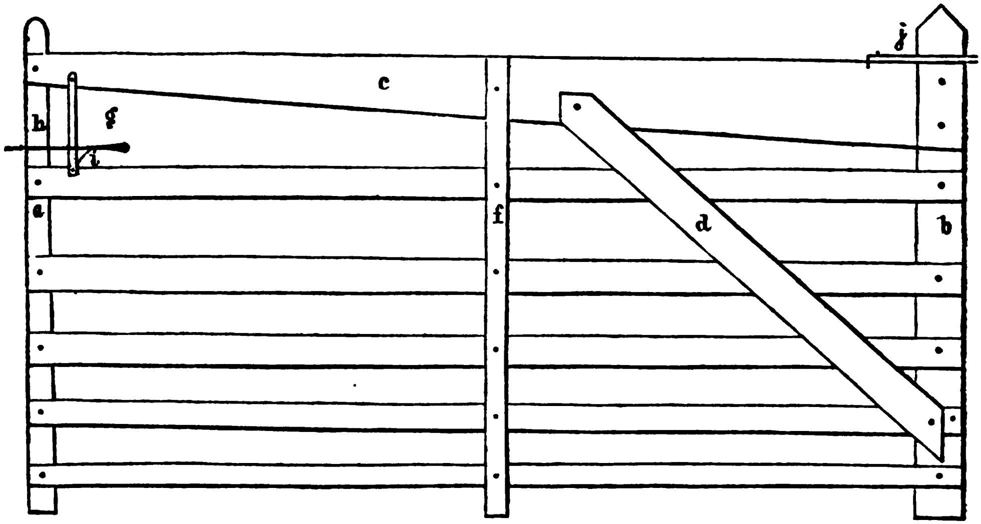
For the American Agriculturist.

FARM-GATE AND ROAD-SCRAPER.

Reynolds Basin, July 25th, 1843.

Dear Sir: I herewith give you a rough sketch of a farm-gate. I do not claim any originality in its construction. I made it myself, and take a little pride in the thing (being only a natural mechanic), because it is made well.

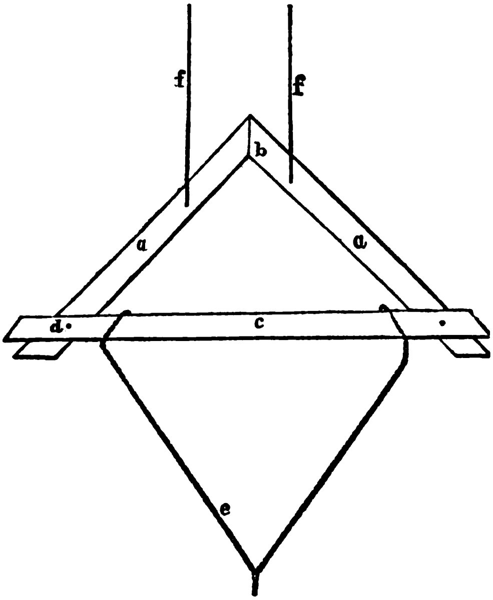
A Farm-Gate.—(Fig. 42.)



a, white oak, 2 × 4; *b*, ditto, 4 × 4; *c*, top rail white ash, 3 inches thick, and 3 inches wide at one end, by 9 inches at the other; *d*, brace, half on each side and sunk in its thickness say 1½ inches at the top rail, and heel-post at *e*, where it is secured by a bolt with a nut and screw; *f*, centre post framed into top rail 2 × 4, and mortises to admit the slats; *g*, fastening, a mortise to be made through the post at *h* to admit the latch; *i*, the spring attached to the upright iron on which is attached the latch. The catch is attached to the opposite post. The upper eye at *i* passes through on the upper side of the tenon, is let in the thickness of the iron. The end is bent at right angles 1½ inches, to be mortised in. The eye to be secured with two bolts. I have secured the post on which the gate is hung at the foot, by bracing three ways all under ground. Frame a sill to the post and brace latterly each side, at the bottom of which have on another sill, and brace toward the gate. Let the post in the ground as far as the top of the braces, when well secured, put unleached ashes around the post to preserve it.

I have just constructed a road-scraper, and believing it to be of great public utility, I take the liberty of giving you a sketch of it. It has been used in several road districts, and indeed such has been the encomiums bestowed on it, that it is now considered the only instrument necessary to repair roads.

(Fig. 43.)



Road-Scraper.

a, *a*, are white oak plank 4 inches thick, and 18 inches wide. The wings are 5 feet long, and bevelled together at *b*, and made secure by spikes or wooden pins; *c*, 4 × 4 scantling framed through the wings at *d*, and screwed by 1½ inch pins running through the plank; *e*, a chain fastened to the cross-piece near the wing; *f*, *f*, handles; bore with a two-inch augur angling through the wings so as to raise the handles of sufficient height. At the bottom and inside of the wings attach a saw-plate, and have it project one quarter of an inch. The draught may be by chain as indicated above, or by a roller and tongue. I prefer a chain. Attach 2 or 3 yoke of cattle, and put on sufficient weight to have it do good execution. Its object is to level the road and fill up the ruts. The angle *b* should be kept over the rut, and as the dirt collects at the angle it falls in, and completely fills the ruts. When you wish to fill considerable of an excavation, retain the dirt until you are over it, then lift up by the handles, and the dirt is deposited. In repairs it will supersede the common scraper, for no sane man should be guilty of scraping in turf or soil into a road. No better material can be used on a road (except gravel), than the dirt already there, and the longer it has been used the better. The operation of the scraper is well calculated to scrape from the sides toward the centre. If you have not anything of the kind, I presume you would be pleased with its operation. It is also well calculated to break paths in the winter, by reversing the draught. I did design to give you a draught of a subsoil plow invented by me, and some information of the great utility of subsoil plowing; but as I design to compete for the premiums on the instrument and its utility at the next State Agricultural Convention, to be held in Rochester September next, I have thought it best to defer it until then.

Sherman McLean.

For the American Agriculturist.

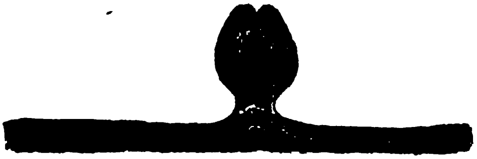
EVERGREEN HEDGES.

New York, August 3d, 1843.

Visiting the estate of Mr. J. P. Cushing, at Watertown, near Boston, a few weeks ago, I was struck with the beauty and economy of some Arbor Vitæ hedges enclosing his grounds. They have acquired a sufficient growth to prevent the passage of all ordinary animals, and have the appearance of enduring many years. It occurred to me that other evergreens, as the spruce and fir tribes, could be applied in the same manner, and serve for the same purposes. Although the Arbor Vitæ possesses more beauty than the spruce and fir, yet we conceive that this is counterbalanced by the advantages attending their cultivation. The latter are cheap, abundant, and will grow in almost every soil and climate.

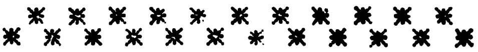
The following diagram will show the mode of setting out these hedges:—

(Fig. 44.)



Transverse or Cross View.

(Fig. 45.)



Ground Plan.

(Fig. 46.)

Side View.

The young shrubs are planted alternately in two rows about nine or ten inches apart, as denoted in

Fig. 44, on a ridge of earth slightly elevated above the common level of the ground. The branches of one row entwine themselves among those of the other, and among themselves, forming a thick, tufted mass as indicated by Fig. 46, which, in ornamental plantations, should constantly be kept clipped, in order to preserve uniformity.

When first set out, the young trees appear to be too far apart, leaving spaces wide enough to admit small animals; but, in the course of a few years, their trunks will increase in thickness, and form as complete a barrier as the thorn or holly.

D. J. B.

The writer of the following communication holds a vigorous pen, and if his position be untenable, we should be glad to see him answered. It appears from the August No. of Hovey's Magazine (page 311), that one of his correspondents has raised a full crop of fruit, and of a large size, from a Hovey's seedling strawberry, he having placed a single plant 210 feet from any other; and he too contends, that "there is no necessity for planting it either among, or close by any other variety, to insure a crop."

For the American Agriculturist.

THE STRAWBERRY.

Astoria, July 17, 1843.

In numerous articles in your periodical and others, I have seen assertions that there were male and female strawberry plants; and a May correspondent in Hovey's Magazine says, "Hovey's seedlings have no males;" and your Cincinnati correspondent, Mr. Longworth, expresses nearly the same opinion; and he gives drawings of the male and female strawberry plant.

The strawberry is traceable to great antiquity. Both Cato and Pliny describe it. The strawberry in its sexual parts has one property corresponding with the almost entire vegetable kingdom; that is to say, to secure fructification, it has the stamens and pistils (the male and female parts) on the same plant. Now to call any *perfect* strawberry plant a *male* or *female plant*, is to assert a fact at variance, the writer believes, though no botanist, with the habits of all other plants; that is to say, there are no intermarriages of plants, changing the sexual character of their progeny, and passing them from the description of those like the strawberry, Icosandria, Polygynia (males and females on the same plant), to those like the hemp and palms, with male and female on different plants. The strawberry produces strawberries of the same order and class with itself. The writer believes, that neither you, nor any of your correspondents, ever found a wild *he* strawberry—he has looked for one in vain.

I write this article, not to discuss any abstruse botanical question, but only to put, as I believe, the growers of strawberries on the *true scent*, rather than to see them occupying their time with pulling up *he* strawberries, or with introducing a male plant to every nine females, as recommended in your December No., by Mr. Longworth, and approbated by Hovey's Magazine and the Albany Cultivator. Mr. L., in his seraglio system—nine female vines to one male—does not inform us whether the male plant has any family *at home*. Now the writer believes Providence acted wisely when he constituted *families*, and placed them under one roof; he believes Providence in the strawberry plant carried out the same principle, and made the stamens (or males) with their anthers, and the pistils (or females) with their stigmas, all in one calix. This position is certainly most likely to secure fructification. But the gentlemen referred to are pleased to recommend a new way of propagating the strawberry, by producing a description of plants all females, that they may be fecundated by strangers. Such cross may be desirable to produce a new variety in the next generation, but not to give, as the writer believes, the means of securing a crop.

The editorial authorities above referred to, are so high, that we may expect all the strawberry growers to set about perverting nature, by getting the strawberry to grow on principles unknown to Linnæus or Jussieu. They thought and have said, that the *strawberry* always had twenty stamens and many pistils, and never knew that a plant would change from its stamen and pistil character, in one calix, to *diæcious*, or having the sexual parts on different plants; they supposed *perfect* plants did not cut such capers as sometimes to have the male and female in the same calix, and then again to keep separate establishments.

We all agree in one point, that the new varieties of strawberries do not produce good crops. Now the writer, with some experience on the subject, puts forth this doctrine, believing it will be found correct. That the strawberry, whether Hovey's or any other kind (and particularly if they are the large kinds, and have been highly cultivated), *approach* in their character to the cultivated rose, the dahlia, and a numerous class of plants, which lose their fructifying parts, and some of which double, as it is called; while in others, the sexual parts are at least imperfect, and produce no seed. The stamens turn into pistils, and sometimes, both stamens and pistils turn even into leaves. Now according to Smith, late president of the London Horticultural Society, the stamens are essential, and no plant hitherto discovered, after the most careful research, is destitute of them, either on the same flower with the pistils, or a separate one of the same species. It therefore results, that Mr. Longworth's female strawberry plant is not a *plant*, in a correct botanical sense, for it does not belong to the class of plants, with their sexual parts on different plants, nor does it belong to its own class, for it has not the stamens and pistils, which the strawberry always has. Now, Mr. L.'s plants are something. Pliny mentions apples without kernels. Now apples which have no seed are no more apples, than Mr. L.'s plants, without a union of the stamens and pistils, were strawberries. The plants referred to are *monsters.* Nature is outraged and set at defiance as much as she is in the double dahlia, carnation, stock, rose, and all the double-flowering trees, though not precisely in the same way; for the stamens are absent in the strawberry, increasing the pistils, or sometimes the stamens and pistils, increasing probably the number of the flowers only. President Smith, referred to, says that the stamens are often obliterated by excessive nourishment. So the strawberry, though the bed is white with flowers, will frequently produce no seed or berries, or at least but a stray one.

Our climate appears well suited to grow the double flowering plants; for instance, the double cherry, almond, the double apple, stock, and carnation, as well as the rose. The dahlia is said to grow or double better than in England or South America, where it is a native; that is, it doubles more and seeds less. Nothing, too, is more frequent than that a young tree is found too vigorous in our climate (the pear particularly) to bear fruit. The books direct the bleeding of them, cutting off the roots, and sometimes taking up and replanting them, not the destroying them because they are *he!* The writer has frequently observed that the modern French grafted pears (on quince stocks) will bear the *first* and second years after setting out, and then will take a start and grow vigorously in leaves, wood, and flowers, but give no fruit; and where the stock of the pear-tree is of its own kind, and in rich soil, it seldom bears sooner than nine or ten years. The dahlia, under poor cultivation, goes back to its seed and single condition.

The writer transplanted a good bed of raspberries (being too much exposed) to a rich light soil, formerly deeply trenched and well treated for asparagus. The raspberries run seven or eight feet high, but he had for three years no raspberries; he put them on a similar spot to that whence he had taken them, and the second year had a good crop. Now I believe, if the flowers had been examined, they would have been found imperfect; that is, the twenty or more stamens, and the many pistils, would not have been found. The farmer experiences *here*, the same principle; if he too highly manures his grain, he gets straw, not wheat—the blossoms not being probably perfect, which is a desideratum in all cultivation except in flowers.

Nothing, it is believed, more frequently fails, than the fine kinds of new seedling strawberries. To remedy this, the strawberry must not be planted in the richest bed of the garden, and there must be no rank or strong manure applied to it. In the fall, bring about the roots a little virgin soil and decayed leaves if you have them. Protect them not with dung, but a little salt hay, if you can obtain it, or the boughs of cedar or other evergreens will answer to screen them from the winds, which is probably all the protection they require, as the strawberry is indigenous to our cold climate. This is my treatment, and I have known a bed of *he*-strawberries go back from their *he* state, until they got in a family way, and produced abundance of fruit.

The treatment recommended will probably not always, nor perhaps generally give a prolific yield of the new kinds of large strawberries. I fear these new varieties are not well suited, at least, for the New York climate. Our market-men *run* on the Hudson, which is, though large, an old variety, and probably indigenous to America; at all events this variety is not so apt to be termed *he*, but generally yields plenty of berries.

The old white and red hautboys and Chilies, and the early scarlet, were with us a sure crop and good fruit. I can not say so much for the large new varieties; their berries in quantity and quality are not generally equal to the small kinds referred to—certainly not in quality to the wild strawberry. The Dawnton, Keens seedlings, and Hovey seedlings, are all in poor repute as bearers; and yet the new varieties are so magnificent in appearance (none more so than Hovey's), and not *bad* either, that I am in hopes your readers will try my cure for their sterile properties. It is believed that the advanced doctrine explains the whole mystery of what is called *he* and *she* strawberries; and the writer hopes it may lead to a rational plan to improve their cultivation.

The philosophy of my remedy is based on the fact, that the strawberry is a delicate feeder. Unlike the grape, it repudiates and abhors the whole class of rich dungs, urates, poudrettes, and guano; for the wild strawberry is found both in the woods on a virgin soil, and on poor sandy hills.

Mr. Hovey's first bed was, he says, very prolific. Mr. H. put in the seed. Providence took care of them, made them male and female in the same domicil. Mr. H., the next year, probably wanted to make—what? strawberries? no, but strawberry runners, and every person to whom he sent them, believing they were a good kind, set about making runners, for sale, and they have got them.

The writer visited an amateur strawberry gentleman this spring, who had various kinds. His Hovey bed was taken peculiar care of, so that he could present his friends some. The writer asked him if they had borne well? He replied they were very large—he would find him *one;* after some little time, one was found, very large, and if strawberries were raised, to be looked at, or taken in small quantities, like medicine, then under the present treatment, they would answer. The runners of these vines in the garden referred to, were four feet long. Mr. Longworth says a plant in his garden, in one year, covered with runners three square feet of ground. Now no plant will do both; make a large amount of stems, foliage, and runners, and bear fruit or berries at the same time.

Mr. Hovey has a good strawberry, if he will preserve its natural perfections, and as fast as he finds nature is varied from, endeavor to restore it; and he should never distribute young plants, except they are *strawberry* plants which produce stamens and pistils. But as Mr. Longworth prefers a strawberry of the Hovey kind, without stamens (and this is one of the principles so much lauded), perhaps Mr. Hovey should be excused for selling such. The Cultivator, too, says, Mr. L. "accounts so truly for the manner in which many disappointments have arisen," and teaches so clearly "the manner in which such failures may be avoided." The plan is this—nine Hovey's female seedlings with one male Hudson! Mr. L. says in the article, "being defective in the male organ increases its value"! "But it is necessary that cultivators should know it, so as to plant a few vines, perfect in the male organs, near them." Mr. L. admits that he is surprised to find no English gardners who understood the true character of the strawberry! In horticulture, the English are admitted to be the greatest proficients in the world. True wisdom leads us to doubt when we differ from such authority.

In examining Mr. Longworth's theory, it is important for us to consider whether the pollen of one strawberry *will* fecundate pistils of another, and if so, with what facility and certainty, and at what distance it will perform this duty.

Mr. L. says that the Hudson, Virginia scarlet, and our native strawberry will not impregnate the hautboy and some other varieties; these are believed to be American varieties. And if the male Hudson will not impregnate the kinds of strawberries as stated above, is it not probable, at least, that they will not, for the purpose of a crop, impregnate the Hovey? If I believed Mr. L.'s premises, I should, with the lights before *me*, come to the above conclusion. Mr. L. says he "kept the male and female Hudson in separate compartments for 20 years, and they never produced perfect fruit." Of course they could not have had the stamens and pistils on the same plant, and if on different perfect plants, then they are certainly no strawberries. A perfect strawberry of the kind referred to by Mr. L. would be a *rara avis*, more so than a black swan, for that I have seen. I may be answered by Mr. L. that "facts are stubborn things." I admit it; but when things are spoken of as facts which are mere matters of opinion and inference, they are to be taken with great allowance, particularly when they appear to violate the usual order of nature, and the opinions of the best informed writers. S. S.

(To be continued.)

ANALYSIS OF MAIZE OR INDIAN CORN.

We have received a letter from Dr. Dana, of Massachusetts, calling our attention to the following communication in the New England farmer, correcting an error which appeared in his analysis of Indian corn, when first published in that periodical, and which was copied in a note of one of our correspondents, page 119 of the current volume of this paper. We insert the correction with pleasure, and should have done so previously, had it not unfortunately escaped our observation. We wish that the state of Massachusetts would employ Dr. Dana to make a similar analysis of other grains, and also roots. We are of opinion there would be a slight difference between those grown in the drier climate and under the hotter sun of the United States, and such as are produced in the cooler, moister climate of Great Britain; and if there be a difference, it is important to the farmer to know it.

To THE EDITOR OF THE NEW ENGLAND FARMER:

DEAR SIR—I ask leave to correct a material error in the statement of the results of the analysis of Indian corn which I sent you, and which you published in your paper of March 8, 1843.

1.26 should be 12.6. Deducting this number, the product of multiplying the nitrogen of corn by 6.20, from the water of vegetation and the salts, we have 77.09.

The corrections thus made, the results are—

Flesh-forming principles—gluten, albumen, &c.	12.60
Fat-forming principles—as gum, sugar, starch, woody fibre, oil, &c.	77.09
Water	9.
Salts	1.31
	100.

With regard, your ob't serv't,
SAMUEL L. DANA.

Lowell, June, 10, 1843.

WE beg especial attention to the present No. on Sheep Husbandry. It is the best and most accurate account we have yet met of the introduction of Merinos into the United States. We trust that our exchange papers will copy it widely, as well as the other Nos. on this subject. We are certain that the public can not be furnished with more useful or interesting agricultural matter.

For the American Agriculturist.

SHEEP HUSBANDRY.—No. IV.

Showing how the United States were once furnished with the most valuable breed of sheep in the world

The early years of the present century should be ever memorable in the estimation of all intelligent Americans and lovers of our country, as being the period of the first introduction into the United States, of the MERINO breed of sheep,—beyond all question the most valuable kind that ever existed in the known world. To that distinguished and patriotic statesman and agriculturist, the late Chancellor Livingston, of the state of New York, has been usually and *deservedly* awarded the credit of being the *first* to introduce the Merinos into this country; but this high meed of praise, and strong claim on the lasting remembrance and gratitude of his country, was justly shared with him by the late Col. David Humphrey, of Connecticut, then minister to Spain, who almost simultaneously with Mr. Livingston's first importation, introduced a much greater number of this invaluable breed of animals. Indeed a single pure-bred Merino ram had been brought to the United States from France, in July of the previous year (1801), by that spirited and enterprising Frenchman, M. Dupont de Nemours. This ram was called Don Pedro, and was of great excellence. He was sent out to this country by M. Delessert, a banker of Paris, intended for his farm, called Rosendale, situated near Kingston, on the Hudson river, where Don Pedro remained about four years, during which, notwithstanding his merit, he attracted but little notice, nor was his value at all appreciated in that vicinity. In the year 1805 he was sold at auction, with M. Delessert's other stock, and was purchased by M. Dupont's agent for the trifling sum of sixty dollars, and was then removed to E. I. Dupont's farm, near Wilmington, Delaware, where he ultimately excited much attention, and was for many years useful in laying the foundation of great improvement, by crossing a large number of native ewes. But the first introduction of pure-bred Merinos *of both sexes*, was in the spring of 1802, by Chancellor Livingston, who being then at Paris as minister from the United States to France, sent home at that time two pairs of fine Merinos, the best he could obtain. These he sent out in the care of one of his own servants, intending (to use his own words), that they should be followed by others, which intention was not (according to my impression), accomplished before 1807, in which year he obtained a few additional very choice Merinos from the celebrated royal breeding flock at Rambouillet.

This distinguished Merino flock was founded in the year 1786, by a careful selection, under authority of the Spanish king, of superior sheep from the best Leonese travelling flocks of Spain. This selected flock consisted of 367 sheep (rams and ewes), which were of such uncommon beauty and excellence, as to be the admiration of all the many Spanish shepherds, through whose flocks they passed on their journey to France. What with their original superiority by selection, and the care and skill with which they were subsequently bred in France, the Rambouillet Merinos, at the time of Mr. Livingston's importation from that flock, were esteemed decidedly superior to any other Merinos in the world, as regards size and *weight and quality of fleece*. Besides getting rid of the very objectionable kempy hairs, sometimes called *jarr*, which to a considerable extent characterized many of the original Spanish Merinos, they had within the first twenty years at Rambouillet, so much improved in fineness, softness, and evenness, as well as weight of fleece, that it was found they could no longer, without injury, be crossed with fresh Spanish blood, though the best that could be obtained from Spain. This high character the royal Rambouillet flock of Merinos has maintained without abatement up to the present day, with no loss of robustness of constitution nor of any other desirable quality. For this, I have the authority of several experienced observers, at different periods, of comparatively recent date. The interesting contrast here presented, as compared with the less fortunate result of our own importations of Spanish Merino blood, made about twenty years later than the origin of the Rambouillet flock, would naturally suggest some important topics of reflection, which shall have attention in due course.

But to return to the early introduction of Merinos into the United States. Mr. Livingston's first importation arrived here safely, as we said, in the spring of 1802, soon after which (I think in course of the same year), Col. Humphrey succeeded in introducing into the country a much greater number, directly from Spain, so that, in the words of Mr. Livingston, "the foundation was then well laid for their perfect establishment in the United States." They however had to contend against much and strong prejudice for several years, during which they made but little progress in the esteem or confidence of the country at large, nor even in their immediate vicinity; and for the ultimate spread of these invaluable animals, the country was much indebted to the untiring personal efforts of the two patriotic citizens whom we have named as the authors of their first introduction. Suffice it to say, that in spite of prejudice and all obstacles, the enterprising and persevering efforts of those gentlemen resulted, for their own credit and their country's good, in glorious success; holding out, in all coming time, a bright example to all, and especially to our public functionaries abroad, that the great and true interests of our country may be essentially promoted by other means than political negotiation and intrigue. The Merinos in the U. S., under the fostering hand of Mr. Livingston and Col. Humphrey, gradually surmounted prejudice and opposition, and finally grew so much into favor, that by the year 1808 the desire for them begat a spirit of hot speculation, and became a sort of disease in the public mind, since characterized as "the Merino sheep fever," or mania, which lasted quite a length of time, and during which single sheep were not unfrequently sold for $1000 and upward, each.

Stimulated by the high selling prices in this country, many persons engaged in the importation of Merino sheep from Europe. The invasion of Spain by the armies of Napoleon, having at that period opportunely thrown open to the whole world the hitherto closed doors of that peculiar and interesting country, some of her choicest Merino flocks became the prey of speculators, and during the years 1808, '9, and '10, vast numbers of Spanish sheep were brought to this country, and landed at almost all the ports from the Potomac to the Merrimac; indeed, the importations to some extent, continued nearly up to the breaking out of the war between the United States and Great Britain in 1812. Selected, or brought out as they were without selection, by persons who had but little or no knowledge of sheep, for the most part mere mercantile speculators and adventurers, of course the *quality* of those importations was unequal, and varied from the *very worst* up to the *very best*. The only wonder is, that so many *good* sheep should have been brought out in the crowd. I well remember that a highly intelligent man, who was at that period personally engaged in sending out a very large number to the U. S. from Spain, once told me, that *at first*, not being able to get access to the choice sheep, the *travelling* flocks of Spain, he had to purchase *at Gibraltar* the best he could get, such as were brought in as market or mutton sheep for the supply of the garrison; but that he subsequently, on the confines of Portugal, during the political troubles in Spain, obtained very choice pure-bred sheep from the Duke del Infantado's flock. Of course some trash was at that period brought into the country; doubtless, many of the sheep were of the *Estantes* or stationary flocks of Spain, and had no pretensions to blood; but among the numerous importations, there were many entire shipments of *inestimable value*, embracing the very choicest blood of the pure, high-bred *Trashumantes* or travelling flocks, such as had never before been accessible to the world at large, the exportation of those sheep from Spain having been interdicted, under the severest penalties, it having been from time immemorial the policy of that government to prevent the diffusion into other countries of her fine-woolled sheep, in which purpose she was a long time strangely and most effectually assisted by the ignorant prejudice existing in other European countries, that the *superior quality* of Spanish wool was owing to the *peculiar climate of Spain*, or to their peculiar method of treating their sheep, their long, annual journeys, &c., &c., and that the Merinos *would not thrive out of Spain*. And here I am naturally and most forcibly reminded of a somewhat similar prejudice which has long existed in a portion of *our own* country, but which is now at last rapidly giving way; i. e. that the growing of fine wool can not succeed with us *out of the old northern states*. This notion has assisted for a long time to give the northern and eastern states almost a *monopoly* of the profitable business of growing fine wool. But there never was a greater mistake: *their patent* for that business is now nearly "run out," and its advantages are, by the diffusion of agricultural intelligence, thrown open to free competition in all portions of our country, where they have enterprise and spirit to engage in the production of this important and profitable staple.

So far from the north and east producing as heretofore *nearly all* the fine wool, the only doubt now is, whether they will long be able to stand their ground in continuing to grow it at all, in competition with the hill country and prairies of the south and west. It is now but a very brief time since it was asserted and generally believed, that fine wool could not be produced on the western prairies; that fine-woolled sheep would not thrive on the natural or wild grasses of the prairies. But the *fact* proves otherwise, and is already acknowledged to be just the reverse. It is the very country for growing fine wool. They only want arrangements for winter keep, with shelters to protect their sheep from the long drenching rains and cold storms of late autumn and winter. Then, with the right sort of sheep, and the benefit of such suggestions as our observation and experience will enable us to offer them in the course of these papers, they may "go ahead" with the certainty of success. The Merino has thriven and done well in all the countries of Europe to which he has been transplanted, not even excepting England, with her peculiar climate of almost constant humidity.

The attempt by the English to establish Merino sheep, and to produce fine wool in their Australian colonies, has, as is well known, been attended with eminent success. This is, however, nothing more than might reasonably have been expected, with a climate such as that is understood to be, for the most part dry, and of course in that respect favorable to the finer sorts of sheep. From that remote portion of the world, England already derives a considerable amount of fine wool for her manufactures; thus serving to render her in some degree independent of Germany and Spain, for the needful supply of this indispensable material.

The introduction of Merino sheep into our own country, in the early part of the present century, was, as I have already stated, entirely successful. They soon became perfectly acclimated, and proved a hardy and profitable race in this country. The cross of Merino bucks with the native ewes, soon became almost universal throughout the northern and eastern states, and was eminently successful, giving a strong and hardy kind, with good size, good quality of wool, heavy fleeces, and excellent mutton. After four or five crosses or more with a good Merino buck, the wool became in most cases nearly or quite as good as the original Spanish, and was then quite as fine and good as the real wants of the country required, or would sustain by adequate remunerating price to the grower. The Merinos that we then had, which are by many persons now remembered as the "old-fashioned Merinos," were almost as tough and enduring as horned cattle, and could not only themselves live, but raised their lambs without difficulty. They were the *right sort*, in all respects exactly adapted to the wants, necessities, and circumstances of this country. Pity it is that we could not have "let well enough alone." But so it was—we did not. After being, as it would almost seem by the hand of Providence, supplied with and perfectly established in possession of the *best, hardiest,* and *most profitable* race of sheep in the known world, we, within a brief time, incredible as it may seem, almost wholly lost or threw them away.

In this paper, you have seen how and when we *obtained* them. In my next, I will, if you please, show how and when they were *lost;* and if time and space then permit, will also point out how they may be certainly, speedily, and cheaply restored to the country, in all their former excellence.

I had intended giving in this or my next communication, a brief sketch or epitome of the history of the Merinos of Spain, together with some particulars of their diffusion throughout most of the other countries of Europe. But it must be deferred for a time, in order to make room for matter of greater present interest.

June, 1843. AMERICUS.

For the American Agriculturist.

PAULAR MERINOS.

Baton Rouge, La., July 20th, 1843.

DEAR SIR: I well recollect the first Merino sheep which appeared in your city. They were landed at one of the lower slips, in the year 1810, accompanied by their Spanish shepherds and dogs, which walked forward, the sheep following them with the utmost docility up Chatham street, and out into the Bowery. I subsequently purchased a small flock of these sheep the same year, at a public sale in the old custom-house yard. They were declared to be of the Paular breed, and among them was a very fine buck, of large size, large dewlap hanging several inches below the neck, much like Mr. Collins's Grandee, though not so fully developed. His wool was very fine and filled with yolk—the ends perfectly crusted, so that after a stormy night, when covered with snow to the depth of three or four inches in the morning, he would rise and shake himself as clean and dry, as if he had been standing in a hot sun. Every part of his body, legs, and head, was covered with wool, and it usually took over an hour to shear him, as I would always have it done in the most perfect manner.

But the object of my letter is to show how grade sheep may be bred with wool sufficiently fine for all common purposes. I purchased a number of large, long-legged, bare-bellied, coarse-wooled, native sheep, with large bags and teats, and put them to this buck. This half-bred produce attained a large size, and averaged 4 lbs. to 4½ lbs. of wool per head, of good quality. They possessed great constitution, were excellent mutton, and according to my notion, a very useful sheep. I have thought, since residing in Louisiana, that a cross of the pure Paular Merino, or Rambouillet, with the old Spanish sheep of this state, would be an equally successful one to that I made so long since at the north, as the old natives there in many respects resemble those we now term natives here.

Very respectfully,
Chas. C. Williams.

As we have had repeated inquiries addressed us as to an Agricultural Institute, where young men could be placed for an education, we would refer our readers to the following communication of the Rev. Mr. Noble on this subject, and for particulars, as to terms, &c., see his advertisement in this paper. We have every confidence that Mr. N. will devote himself entirely to his pupils, and that they will have all the attention bestowed upon them, and receive all the advantages in their education promised. As this is the first attempt to establish an Agricultural School in this vicinity, we trust that he may receive full encouragement in his highly useful and praiseworthy undertaking.

For the American Agriculturist.

AGRICULTURAL INSTITUTE.

Bridgeport, Conn., August 16th, 1843.

Dear Sir: The object of the Agricultural Institute which I am about to establish here, is to furnish a system of education adapted to the wants of those youth who may be designed for the pursuits of agriculture. It is remarkable that agriculture, on which mankind are dependent for their very sustenance, which employs daily "not less than two hundred millions of men, and nine tenths of the fixed capital of civilized nations," should have received, comparatively, so little attention from the learned and powerful, and that it has yet no schools or colleges to investigate and illustrate its principles, to advance its interests, to elevate its character, and to give it, both as an art and a science, its just place among the several departments of human learning. It is intended that the Institute shall provide the means of a complete agricultural education. Those only will be received into the Institute who have made considerable advancement in the ordinary branches of an English education. The full course of instruction will require from three to four years, and will embrace all the natural sciences, with their application to Agriculture, the evidences and general principles of natural and revealed theology, mathematics, moral philosophy, political economy, rhetoric, history, original composition, the drawing of various business papers, extemporaneous speaking, and the principles of civil, constitutional, and national law.

It is designed that courses of lectures shall be delivered on the different branches of natural science, by distinguished professors, and particularly upon chemistry in connexion with its application to agriculture. The ancient and modern languages will be taught, if desired; and lessons in music, penmanship, and drawing, may be obtained at moderate charges.

There will be a systematic course of agricultural experiments, to test the value of different modes of culture, of the several kinds of manure, and of all such products of the farm as may be suited to the climate.

The pupil will have an opportunity of witnessing the various operations of farming, horticulture, and the planting and growing of fruit and ornamental trees, with the formation and use of the several kinds of manure. He will not be required to engage in field labor, except perhaps to learn the use of agricultural implements; but when desired for the purposes of health or economy, he may be employed on the farm, in the garden, or nursery, a given number of hours daily, for which a just allowance will be made on the term bills. A skilful farmer, gardener, and nurseryman will be employed, and the department of each will be conducted by system, and with a studious regard both to economy and to scientific principles.

An advantage it is thought will be found in the fact, that the improvements in laying out grounds, fencing fields, and erecting suitable buildings for the various purposes of a farming establishment, will be progressing—affording the pupil, at the same time, a source of amusement, and an opportunity of much valuable instruction.

My location is well suited for such an institution. It is on the east bank of the harbor, within a few minutes walk of the churches, and yet so retired, rural, and beautiful, as to be in every way suited for the residence of pupils. Two steamboats run each way daily, between this and New York, and the Housatonic railroad connects us with the interior, Albany, and Boston. Sixty acres of land lying in one tract (enough for all the purposes of such an establishment), surround my residence—presenting from every part of it agreeable views, and nearly all under cultivation. I am, if not an enthusiast, very fond of the business, both of instruction and agriculture. For some twenty years I united the teaching of the classics with the duties of a parish. Several years since, I retired to my present residence, and have been engaged chiefly in farming and gardening, and in planting a nursery. While the pupil is connected with the establishment, it is intended that he shall witness all the operations of the agriculturist, and form such tastes and habits, that in after life he may combine the cultivation of the soil with intellectual improvement.

B. G. Noble.

We were in error in stating in our last, that the Show and Fair of the American Institute commenced on the 9th of October next; it begins on the 10th. See programme below.

For the American Agriculturist.

PROGRAMME OF THE AMERICAN INSTITUTE.

New York, Aug. 4, 1843.

Dear Sir:—Agreeably to your request, I send you a general programme of some of the leading operations which have already been determined on for the 16th Annual Show and Fair, which will be held at that well-known place, Niblo's Garden, commencing the 10th October next. It is fitted up in a style that far surpasses what it ever has been before. There are many circumstances connected with this anniversary calculated to give it peculiar and powerful attractions with the considerate and influential portion of Americans. A new and a remunerating staple seems to be imperiously called for, which may be disposed of in the foreign markets of the world.

The demand for our leading staples for a series of years, exhibits an alarming falling off, in proportion to the increase of our population. Shall we continue to increase their production? This will diminish prices still more, and their decline will more than counterbalance the increased production. As proof of the diminished foreign demand, statistics show that the sales of tobacco in foreign markets have, within a few years, fallen off three fourths, making the proportional allowance for our increased population. Flour about the same; and beef one third. Our exports of the products of the forest have also experienced a similar falling off.

Great exertion is made to extend the growth of cotton, and what does it avail? The declining prices defeat the hopes of the planter. This state of things is universally felt, and there is a cry for a new staple from Maine to Florida.

The necessities of our country have created this universal desire for a new and reliable staple, that will compensate labor for its culture. And such the American Institute believe is *Silk*. It is high time this question should be decided. For this purpose a silk convention will be held, and all the statistics necessary to its decision will be collected as far as practicable. Members will be desired to bring all the facts within their knowledge, imbodied for the use of the convention, to enable them to come to a correct conclusion. If the facts obtained show that its culture will be profitable, it is believed by many that $50,000,000 value will will be produced in these U. S. annually, in 10 years from the annunciation of this conclusion.

The Convention of the New York Agricultural Society, to ascertain the merits of different breeds of cattle, is well worth the attention of that distinguished association. Breeding and feeding have in one century tripled the average weight and value of cattle in Great Britain. Their herdsmen do not remit their exertions to improve still further, one iota. Every motive of pride and ambition are presented to stimulate their exertion. See the array of noble lords who attended the late show of the Royal Agricultural Society of England, at Derby. The public spirit with which they were inspired. Two thousand persons partook of a public dinner. About four times as much was required for admission to the exhibition as at our great annual Show and Fair, and not a complaint is heard. Their speeches breathe an enthusiasm that will be felt through the kingdom, calculated to make the husbandman respected, and dignify and ennoble his occupation. Do they misjudge, and give to agriculture an undue importance? If they do not, let us follow their wise example.

The managers have determined that the following shall constitute a part of their arrangements.

Tuesday, Oct. 10th.—The display will open to visiters at 9 o'clock A. M., and continue unto 10 P. M., through the Fair. Address at 7½ P. M., in Niblo's saloon. Fireworks at 9 P. M. Friday and Saturday previous are the days for receiving articles for competition and exhibition, and Monday for arrauging.

Wednesday, 11th.—Address in the saloon at 7½ o'clock P. M.

Thursday, 12th.—Silk Convention at 10½ A. M. Address in saloon at 7½ P. M. Every member is desired to bring a complete history of all he has done in Silk, with all the important facts he has obtained.

Friday, 13th.—Silk Convention continued.

Saturday, 14th.—Address at 7½ P. M.

Monday, 16th.—Entries of Cattle, Horses, &c., at Niblo's Garden. Pedigrees signed by the owners required. Plowing exhibition at Paterson, and Address.

Tuesday, 17th.—Making catalogue of Cattle. Convention of N. Y. State Agricultural Society at 7 o'clock P. M. Subject, the Merits of Different Breeds of Cattle.

Wednesday, 18th.—Cattle exhibition. The cattle must be on the ground by 9. A. M.

Thursday, 19th.—Last day of cattle exhibition. Address on Agriculture 7½ P. M.

Friday, 20th.—Anniversary Address.

A number of other addresses will be delivered, of which notices will be given, with other transactions to be determined upon hereafter.

P. S. *Silk* will also be a leading article, as well as fruit, flowers, and agricultural productions generally. An effort will be made to procure a full display of *poultry*. As *household manufactures* have commanded legislative attention, a medal will be bestowed on the exhibiter of the greatest variety and best quality of household furniture. Room will be reserved for the mechanical operations of the trades, such as *reeling*, particularly silk; also for *spinning*, *weaving*, *turning*, *casting*, &c. The best construction of a *silkreel* for general use, is of paramount importance to the silk culture. The exhibiters of the greatest varieties of highly-finished and well-adapted *farming* and *gardening* implements, will command a premium.

T. B. Wakeman,
Cor. Sec'y.

NEW YORK STATE AGRICULTURAL SOCIETY.

The regular meeting of the Executive Committee of the N. Y. S. Ag. Society for July, was held at Rochester, on the 12th. Present, Mr. Wadsworth, President; Messrs. Sherwood and Langworthy, Vice Presidents; Mr. Tucker, Secretary; and Messrs. Walsh of Lansingburgh, and Hillhouse of Albany, members of the Board. There were also present, the president and several of the officers of Monroe Co. Ag. Society, together with a number of citizens of Rochester, who took part in the deliberations of the committee, and evinced a warm interest in behalf of the efforts of the society.

Propositions were made to alter the time of holding the fair to an earlier day than had been fixed upon, and to alter the premium list so as to give separate prizes to the different breeds of Short Horn, Hereford, and Devon cattle. Both propositions were, however, after full discussion, rejected.

The committee, after viewing the different locations offered for holding the society's Cattle Show and Fair, which is to be held on the 19th, 20th, and 21st days of September next, selected a beautiful spot on the west side of State street, about a mile north of the centre of the city of Rochester. The ground is elevated and dry, with a close heavy turf, and is admirably located for the purpose, being on one of the principal avenues, with a macadamized road and sidewalks extending to it.

The question of enclosing the grounds, and charging the small sum of 12½ cents for admission, as practised at the last fair in Albany, was discussed, when it was unanimously

Resolved, That a committee of arrangements be appointed, whose duty it shall be to prepare the show grounds for the exhibition, by causing eight or ten acres, as they may think best, to be enclosed with a high and substantial fence; to erect such building or buildings as they may deem necessary; procure tents, build pens, &c.; and that to defray the expenses thus incurred, a fee of 12½ cents be charged for admission.

The following gentlemen were appointed for the purpose specified in the above resolutions:—

Committee of Arrangements.—J. S. Wadsworth, Esq., Col. A. Sawyer, L. B. Langworthy, Lemuel Thompson, Gen. R. Harmon, C. F. Crosman, P. Barry.

The following gentlemen were appointed judges, to award the premiums to be paid at the fair:—

On Bulls, Classes I., II., III., IV.—James Gowen, Philadelphia, Pa.; William Garbutt, Wheatland; C. N. Bement, Albany; Wm. Fuller, Skaneateles; Z. A. Leland, Bath.

On Cows, &c., Classes V., VI., VII., VIII.—Adam Fergusson, Watertown, U. C.; Henry Whitney, New Haven, Conn.; H. D. Grove, Hoosick; G. V. Sackett, Seneca Falls; Edward A. Le Roy, Avon.

On Cows, &c., Classes IX., X., XI.—L. C. Ball, Hoosick; Thos. Weddle, Rochester; Lyman Hibbard, Homer; John Ayrault, Perrington; Elijah W. Sheldon, Sennet.

On Cows, &c. Classes XII., XIII., XIV.—Daniel H. Fitzhugh, Mt. Morris; Wm. Parsons, Lockport; Jno. Webster, Hamburgh; Abel Baldwin, Clarkson; Lee Comstock, Le Roy.

On Working Oxen and Steers.—Wm. A. S. North, Schenectady; Israel Boies, Homer; Obadiah Hoag, Lockport; C. A. Godfrey, Geneva; E. Marks, Navarino.

On Fat Cattle and Fat Sheep.—P. N. Rust, Syracuse; Allen Frost, Rochester; J. C. Mather, Schaghticoke; Holloway Long, York; William Otley, Phelps.

On Stallions and Matched Horses.—Francis Rotch, Butternutts; Allen Ayrault, Genesee; F. F. Backus, Rochester; Samuel Greenleaf, Canandaigua; J. R. Speed, Caroline.

On Mares and Colts.—W. T. Porter, New York; D. D. Campbell, Schenectady; Abram Vought, Mendon; Joseph Christopher, Rochester; Dan Hibbard, Cortlandville.

On Swine.—T. C. Peters, Darien; E Wolcott, Rochester; Ezra Cornell, Ithaca; O. F. Marshall, Wheeler; Wm. Salisbury, Leeds.

On Sheep, Classes I., II.—R. L. Allen, Buffalo; S. E. Hudson, Palmyra; F. M. Rotch, Butternutts; Ira S. Hitchcock, Oneida Castle; Jared Colman, Rochester.

On Sheep, Class III.—J. P. Beekman, Kinderhook; William Randall, Cortlandville; L. A. Morrell, Lake Ridge; R. Harmon, Jr., Wheatland; R. C. Nicholas, Geneva.

On Plows.—Geo. W. Patterson, Westfield; Myron Adams, East Bloomfield; C. C. Dennis, Auburn; John Moxon, Charlotte; C. S. Button, Newark.

On other Agricultural Implements.—L. B. Langworthy, Rochester; J. C. Langdon, Troy; Geo. C. Latta, Charlotte; T. D. Burrall, Geneva; C. F. Crosman, Rochester.

Plowing Match.—J. B. Nott, Guilderland; Theron Brown, Wheatland; E. A. Howland, Ledyard; William Gorham, Canandaigua; Jno. H. Robinson, Henrietta.

On Butter and Cheese.—Rob't Deniston, Salisbury Mills; B. P. Johnson, Rome; Laurens Hull, Angelica; Dr. T. Goodsell, Utica; Z. Barton Stout, Richmond.

On Maple and Corn-stalk Sugar.—John Greig, Canandaigua; H. S. Randall, Cortlandville; Thomas Hillhouse, Albany: A. B. Dunlap, Ovid; John Vernon, Mt. Morris.

On Silk.—Orville Hungerford, Watertown; Henry Polhemus, Auburn; T. Mellen, Madison; William Kidd, Rochester; Robert Rose, Richmond.

On Domestic Manufactures.—Samuel Cheever, Albany; Lewis Brooks, Rochester; Geo. Byington, do.; M. W. Soper, Batavia; J. B. Dill, Auburn.

On Vegetables.—Abner Bryant, Buffalo; Lemuel Thompson, Rochester; William Blossom, Canandaigua; Asa Rowe, Sweden; Dr. Beaumont, Lyons.

On Fruits.—J. J. Thomas, Macedon; John R. Murray, Mount Morris; Benjamin Hodge, Buffalo; N. Goodsell, Rochester; Dr. Doty, Montezuma.

On Flowers.—Alexander Walsh, Lansingburgh; P. Barry, Rochester; M. B. Bateham, do; S. E. Warren, Troy; James H. Watts, Rochester.

On Discretionary Premiums.—J. B. Duane, Schenectady; Jno. J. Viele, Lansingburgh; Harvey Baldwin, Syracuse, J. McDonald McIntyre, Albany; G. I. Pumpelly, Owego.

Premium on Steers.—The following were added to the premium list:—

Three Year old Steers.

Best pair - - - $10 | Second best - - - $5
Third best, volume of Transactions.

Two Year old Steers.

Best pair - - - $8 | Second best - - - $4
Third best, vol. of Translations.

M. B. Bateham, Esq., Rochester, was appointed Assistant Secretary for the Fair.

J. M. Sherwood, Esq., was appointed a committee to make arrangements with the several railroad companies for the transportation of stock to and from the Fair.

Hon. Isaac Hill, Dr. Alex. Kelsey, and Gen. J. Gould, of Rochester, Hon. C. H. Carroll, of Livingston, and Luther Tucker, of Albany, were appointed a committee on invitation and reception of strangers.

The Executive Committee adopted the following

Regulations for the Fair.—The premiums for Essays and for Agricultural Implements will be open to the United States; but all others will be confined to residents of this state, who are members of this society, or who may become so by the payment of one dollar on entering their articles, and to the members of the Monroe Co. Ag. Society, who shall have paid their membership for the present year.

All persons who intend to exhibit cattle, horses, sheep, or swine, should give notice to M. B. Bateham, assistant secretary, Rochester, or to Luther Tucker, Albany, previous to the 10th of September, in order that the necessary accommodation may be made for them; and all animals must be on the ground by 9 o'clock of the 20th.

All those who intend to compete for the premiums on agricultural implements, butter and cheese, sugar, cocoons, silk, &c., should have their specimens on the ground on the 19th, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the fair.

Applicants for premiums are requested to pay particular attention to the notes attached to the premiums on dairy cows, fat cattle and fat sheep, butter and cheese, field crops, maple sugar, &c.

The statements required from those who compete for field crops, must be sent to Luther Tucker, recording secretary, Albany, previous to the 1st of January, 1844, and the premiums will be awarded at the annual meeting of the society, on the third Wednesday of January.

Competitors for the premiums on essays must forward their manuscripts to the recording secretary, Albany, previous to the 1st of January, 1844, free of postage.

No premium will be awarded, unless, in the opinion of the judges of the class in which it is offered, the animal or article is worthy of such premium.

Prize animals and implements at the previous exhibitions, will be allowed to compete for the prizes; but they must receive a higher prize, or in a different class, to entitle them to a premium. Should the same premium heretofore given them be awarded, they will receive a certificate to that effect, instead of the prize.

All premiums will be paid in cash or plate, at the option of the winners.

For the American Agriculturist.

SOUTHERN CALENDAR FOR SEPTEMBER.

For the ensuing three months, the work is pretty much the same, gathering cotton, sunning, ginning, pressing, hauling off, and commencing again the same tale. Not having given any directions about this, in the preceding month, I will now give a few general rules, hoping many may profit by them, having myself experienced a want of this kind of instruction. "Bought wit" is said to be the best, if it does not cost too much; but if those advocates for this kind of learning could remember how they were worried when commencing life, they would certainly feel as I do, sincerely desirous to assist their junior brothers.

As cotton planters, our object is to make the most clear gain per hand, and of course, whatever mode will tend to this is the one to be pursued. I therefore advise that cotton be gathered from the field free from trash, put it on scaffolds, and dry until each seed will crack between the teeth, *not mash*, then if the seed be not wanted for planting, throw the cotton up into a pile in the gin-house, until it acquires a sensible heat, then scatter it, and when cool, gin it. Do not run your gin too fast, too much rapidity is not good; two bales a day on a fifty-saw gin is enough; drive team slowly and steadily. Press your bale small, and cover well; leave not a particle of cotton in sight, and mark neatly. Appearance is something.

I prefer to gather corn, if not gathered already, in wet weather, or to continue at improvements, than to gathering cotton wet. For it is not only troublesome to dry, but the leaf and dirt adhering to the cotton stain it, and frequently, if warm wet weather, the seed will sprout on the scaffold. Employ these days in housing corn, gathering peas, hauling in pumpkins, fodder, and other farm work.

In this month sow rye over corn field or cotton field, or in wood pasture, at the rate of 1 bushel per acre; it will come up and do well without any plowing. I can now show a promising crop (April) treated in this way; it affords excellent grazing through the winter, and until wanted for spring crops. Sow Egyptian oats not less than 1½ bushels per acre; I have sown 2½ to the acre, which I think still better. For a crop of rye sow 1½ bushels, wheat 2 bushels; it must all of it be grazed down, to prevent jointing before spring, which I presume no farmer will object to.

Should your forage crop not be large enough, have recourse to your pea fields. Cut off the vines even with the ground, or pull them up, and haul home the same day. Put them into a rail-pen, by having a floor of rails 1 foot above the earth; then put in a layer of vines, sprinkle salt on them, then a layer of straw, and again a layer of vines. Make all this about 3 feet thick, without tramping; then another floor of rails, and continue as above, sprinkling each layer of vines with salt. The vines thus put up, though they may mildew a little, will be eaten greedily by horses, mules, or cattle, and they can be kept fat on them. Do not be too greedy in saving cotton, to the want of duly providing peas and provender in great abundance.

When you possibly can, start a few plows on stiff land; if land be sandy, time enough several months hence.

Your potatoes will do best to remain in the ground until the vines be killed by the frost; I never think of digging until that time. I then prefer dry, pleasant weather, and continue digging until finished; then sort in the field. The cut potatoes to be eaten early, or fed to stock; small ones to go into the slip banks, and the large reserved for the table. I then haul them to a place prepared for banks, and put up as recommended in an article, page 23 of your April No. I will now close the crop year, by pressing on you to provide abundant food for your hands, your horses, your cattle, your hogs, your land, "the stranger within thy gates," or "the wayfaring man;" preferring to make 5 bales of cotton to net the same amount, by being choice, than the character of being a big planter. Rely on it, the difference in your household will soon convince you of the delights of this at least. By doing this, your friends will love you the more, your neighbors will see an example that they will imitate.

M. W. Philips.

For the American Agriculturist.

NORTHERN CALENDAR FOR SEPTEMBER.

Kitchen Garden.—Select a dry, warm, protected place, and plant the lettuces sown last month for spring use. If the weather prove dry, let them be well watered. Early in this month, the Spanish kinds of radish can be sown, and on the approach of frost, taken up and preserved for winter use in the same way as turneps or beets. Hoe and thin out the crop of turneps during this month. About the middle of the month, sow cabbage seed to remain in the seed bed all winter, and be ready for transplanting in the spring. Sow cauliflower and broccoli also to furnish plants for the spring. Gather each kind of seed as it ripens, and dry it well before putting it up.

Fruit Garden and Orchard.—Budding and inoculating peaches can be continued, and also the other fruits as long as the bark will peel. Trees and shrubs may be propagated by cuttings and layers. When it is necessary, trim pines, firs, walnut trees, and maples, as the sap will not so much exude as in the spring. Plant beds of strawberries.

Flower Garden and Pleasure Grounds.—The directions for last month will also apply to this. Prepare beds for planting tulips, hyacinths, anemones, ranunculuses, and other flower roots and shrubs that are to be planted next month.

S. B. Parsons.

FOREIGN AGRICULTURAL NEWS.

By the steampackets Acadia, Hibernia, and Great Western, we have regular files of European journals to the 5th August.

MARKETS.—*Cotton* has advanced since our advices of the 4th of July ⅛d. per lb. A large business has been done in it during the last month, and upon the whole, prospects seem rather in favor of a still further advance. The stock on hand at Liverpool on the 1st August, was estimated at 941,000 bales, against 592,000 at same period last year. *Wheat*, *Flour*, *Beef*, *Pork*, *Lard*, *Hams*, and *Bacon*, were in good demand, and prices advancing. *Butter* quite nominal. *Cheese* in fair request. *Lard-oil* had just appeared in market, and was exciting some attention. In *Rice*, a large business was doing, and for *Tobacco*, a fair demand existed. With the exception of cotton, there was but a light stock of American agricultural exports of all kinds on hand, and we think that large sales for them were never more certain, and we congratulate our planters and farmers on the flattering prospects abroad for their products.

Money is as abundant in Europe as ever, and there is no doubt that capitalists will soon embark in enterprises for its more full employment. *American stocks* were looking up a trifle.

The Weather for the last fortnight had been cold, rainy, and unfavorable, and fears were entertained that the crops would suffer somewhat in consequence of it. The harvest will be late and precarious, which will doubtless have some effect upon our own grain and provision market.

In addition to our regular journals, we are indebted to P. L. Simmonds, Esq., Foreign Newspaper Agent, No. 18 Cornhill, London, for the Derbyshire Chronicle, Family Herald, Mark Lane Express, Pictorial Times, Illustrated News, Model Mapping, &c., &c. The great event of the month was the Annual Meeting and Show of the Royal Agricultural Society of England at Derby. It was as usual most numerously attended, upward of 40,000 persons being present, with a superb display of stock, agricultural implements, seeds, and roots. The Pictorial Times, and Illustrated News, have given numerous handsomely-engraved sketches of the scenes at Derby, the grand pavilion dinner, plowing match, cattle yard, stock, implements, visiters, tents, and booths.

It was commenced on Tuesday, July 11th, and coninued four days. The first day was devoted to the show of implements in the yard, and we see that iron is much more used in all these than in our own country; or there are gates, gate-posts, fences, coping, spouts, eeding-troughs, mangers, racks, rollers, tree-guards, urdles, wheelbarrows, plows, harrows, chairs, tree-tands, pumps, liquid-manure tanks, buckets, and a reat variety of other things made up entirely of iron.

The second day, the plowing match, and a general ial of implements took place, which for the want of roper ground, and the difficulty of procuring horses, roved a failure. The implement-yard continued open r visiters; but that where the stock was stationed as kept closed to the public, so that the judges might t be interrupted in their inspection. Of what else ere was to be seen on this day, the London Farmer's Magazine gives a somewhat comic description.

We may briefly remark upon the accommodations d amusements which had been provided for the "enrtainment of man and beast." The whole neighborod of the large pavilion which had been erected, in se contiguity to the railway station, and consequently the town, was crowded with suttling booths, bazaars, ar divans, shows, moveable theatres, stalls for games of chance, swings, and all the paraphernalia of a country wake or fair. There were likewise book stalls, and temporary newspaper offices, at which the daily London and provincial weekly newspapers might be procured in abundance. There were exhibitions of curiosities and wonders more than the most insatiable appetite for monstrosities and sights could have desired. There were wild beasts and tame beasts, jugglers, pyrotechnists, and other animals, human, inhuman, and superhuman, "new as imported," to say nothing of the arboretum, the museum, the theatre, and other places of spectacle and amusement native to the town.

Of those exhibitions brought for the occasion, the picture of the Country Meeting last year of the Royal Agricultural Society, containing upward of 130 portraits, was chief; many of the portraits were good, alike in point of execution and similitude. Among the more marvellous sights, was that of a tree, exhibited as "The largest tree in the world—the Mammoth Sycamore of Indiana!" It was asserted to be 75 feet in circumference, to have stabled 17 horses at one time, to have been the famed Gretna Green of Indiana; and for some years to have been used by a giant as a hotel for travellers. This vegetable phenomenon is said to have been known for about 50 years as the great Salt River Sycamore, and is supposed to have existed before the deluge. The history of its arrival in this country is, that Mr. G. Combe, the phrenologist, while on a tour from New York through the western states of North America, made arrangements for its removal, and at considerable cost it was conveyed by the various rivers and the Mississippi to New Orleans, thence to New York, and London.

We give this, however, merely as a sample of the miracles of nature which Derby was made the theatre for the display of, not as a question pertaining to agriculture. We plead guilty to not having had our curiosity sufficiently raised to throw away a shilling for an inspection. Besides these exhibitions, there was one of a grand double centrifugal railway, and, as the auctioneer's catalogues say, "other things too numerous to mention."

The day closed by a council dinner, at which Earl Hardwicke presided, and this does not seem to have been managed much better than the trial of implements, and here we again quote from the Farmer. When we arrived at the County Hall at five, we found a large number of persons waiting at the iron gates in the pouring rain, among whom were most of the noble guests who were to be present, and who were uttering complaints both loud and deep of the treatment they experienced. Surely some waiting room could have been provided for the guests, as a shelter from the inclemency of the weather. When the gates were at length opened, so eager were the parties to get under cover, that there was a complete rush, and the gates were borne forcibly open, every one making pell-mell for the small entrance gateway into the hall, which was insufficient to admit more than one or two persons at a time. The squeeze here was terrific, and there was no possibility of collecting the tickets; some were, however, delivered here, and the others collected afterward, but this afforded no check to the intrusion of uninvited guests. There were five lines of tables, which completely filled the body of the hall. The dinner, which was neither cold nor hot, was a very wretched affair, there being a paucity of everything—provisions, waiters, plates, &c., &c. The only thing on which we can at all pass a commendation was the wine, which was cool and pleasant.

To make amends for this, the speeches were unusually good, and among them we see a report of that of Mr. Colman, of Massachusetts. The first prize of 30 sovereigns, for the best Short-Horn bull, was adjudged to W. Barnard, M. P., of Essex, and was bred by Earl Spencer. The prize of 15 sovereigns for the best cow in milk, was adjudged to Mr. Thomas Crofton of Durham, for his Short-Horn cow, bred by Mr. John Colling of Whitehouse. There were 98 head of Short-Horns exhibited. Mr. Jeffries of Pembridge, took the first prizes on Herefords; Mr. Turner of Exeter, on Devons. To Mr. Pawlett of Bedfordshire, Mr. Cook of Doncaster, Mr. Smith of Oxon, and Mr. Large of Burford, were adjudged the first prizes on Long-Wooled sheep. Mr. Webb of Cambridge as usual carried away the first of the prizes on South-Downs. To Mr. Howsin of Nottinghamshire, and Mr. Ingli of Evesham, were adjudged the first prizes on Cart Horses. To Mr. Cartwright of Burton-on-Trent, and the duke of Devonshire, were adjudged the first prizes on Swine of a large breed; and to Mr. Hall of Essex, and Shelcock of Melton Mowbray, the first prizes of the smaller breed.

The third day the cattle-yard was thrown open to public admission, at the price of 2s. 6d. in the morning, and at 1 o'clock P. M., at 1s. The Great Pavilion dinner took place this day, at which 1,500 persons sat down. Among these were our ambassador, Mr. Everett, and Mr. Henry Colman. The former made an admirable speech, which we should like to copy in extenso, but we have only room for a short extract. He believed that if one thousandth part of the energy, of the skill, and of the treasure, that had been expended by rival nations in the deadly struggles of what was called the field, had been expended in a generous emulation to excel in the arts of peace (*cheers*)—he believed if this were done, the farmers would very soon drive the diplomatists out of the field (*laughter*). At any rate they would leave little to be done in carrying on angry national disputes (*cheers*). The Chairman had alluded to the growth of commercial intercourse between this country and his own; he hoped that intercourse might become yet more extensive than it had been (*cheers*). A thought had struck him since this subject was introduced last evening; the commerce between the two countries was the largest that existed between any two countries on the face of the globe. The amount of that commerce was nearly two-fold of that between any other people.

The Chairman, Earl Hardwicke, seemed particularly felicitous in his various short speeches; and among other things, to prove that Derby was once famed for its stock, he quoted the following lines, which were received with roars of laughter. We well recollect hearing this famous song sung hundreds of times, in our boyish days, in the valleys and on the hills of New England; so that it will be seen we are genuine descendants of John Bull.

"As I was going to Derby all on a market day,
I saw the finest ram, sir, that ever was fed on hay;
This ram was fat behind, sir, this ram was fat before,
And between the horns of the ram, sir, you could turn a
coach and four!"

The fourth day the show yard still continued open at 1s., and at 10 o'clock a sale of a considerable portion of the stock took place. Among the animals disposed of, were nine Short-Horns, from the herd of Mr. Jacques, for 600 guineas; and one cow of Mr. Watson for 150 guineas.

The business of the meeting was concluded by the general meeting of the members, which took place at the Pavilion at twelve. The pleasures and amusements, however, were not yet ended, for at twelve the large dinner pavilion was thrown open to the public with further attractions. A very elegant horticultural exhibition and fete having been got up, the proceeds to be devoted to the building of a church at Hazlewood, there was a magnificent display of fruit, flowers, and vegetables, especially some choice and rare stove plants, &c., from the greenhouse and conservatories of his grace the duke of Devonshire at Chatsworth.

Notwithstanding some complaints at the present show of this great national society, it is said to have been better and fuller than any ever yet held, and its members and funds are constantly increasing. Upwar of 7,000 have joined the society, with the payment of a sovereign each, making its annual income ove $30,000. The next July show is to take place a Southampton.

GARDENER'S MAGAZINE.—*Curl in the Potato.*—Thi is principally occasioned by using imperfect seed tha has not been sufficiently ripened; such, for instance as late-planted potatoes: many select them becaus they are not fit to eat, and, therefore, think they wi do to plant. Over ripeness also has the same effect Potatoes then curl because they have lost part of thei properties and substance; while the partially ripe cur though not possessing these properties and substance a all. It is the same with wheat and other grain, frui and indeed all seeds.

Dry Rot in the Potato.—This is attributed to e haustion of the seed before planting.

Culture of Strawberries.—These should not be plan ed less than two feet apart each way, and never allowe to stand more than two years, taking care always t keep all runners cut closely off; by these means ther is a greater weight to be obtained, finer fruit, and be ter flavored, as the sun and air can circulate mo freely among them; and mulching them with clea short grass, just as they come into bloom, keepin them clean, and the ground moist, makes them flouris If they are obliged to be watered, it must never b done with a rose on the watering-pot, but by pourin round the roots from the spout, so that they get a go soaking without wetting the fruit; for it spoils t flavor of the fruit if is over-watered. The best-tast and most prolific strawberries are Myatt's Briti queen, Myatt's Eliza, Myatt's pine, Downton, Kee seedling, and the old true Scarlet pine. I find that t plants that have been forced, by being turned out soon as done with into a good bit of ground well p pared, always make fine stools for the next season, bring a good crop the same autumn, which is fou to be very useful. Any good holding loam will gr strawberries, and bring them to a good flavor, if w prepared and sweetened by the atmosphere first; a some good rotten dung worked in among it, and a lit soot sprinkled in among them and hoed in in the mo of April, will make an astonishing difference in t quality and flavor of the fruit; and, if the ground h become hard after heavy rains, sow some charcoal d among them, and hoe it in, which will soon purify t earth, and improve the crop wonderfully.

Testimonial to Dr. Neill.—The practical gardene in Scotland and other parts of the world, to the nu ber of 600, presented this celebrated horticulturist a naturalist, a beautiful silver vase of great value, a testimony of his worth and devotion to horticulture a the interests of its cultivators. A meeting of a la number of gentlemen was held at the time, connectw with a dinner, speeches, and general rejoicings.

GARDENER'S CHRONICLE.—*Onion Maggot.*——T grub is destroyed by strewing a little nitrate of soda the places which are affected; the soda also pro beneficial as manure to the roots and tops.

Angle of the Roofs of Greenhouses.—These are best anywhere between 35° and 45°.

Quantity of Grass Seed for Lawns.—Thirty-nine pounds of seed, and five different kinds are recommended to be sown per acre.

To Destroy Green Flies, Gooseberry Caterpillars, &c.—Ammoniacal liquor from the gas works diluted with water, is found quite effectual; it also acts as a manure, and adds much to the growth of the plants and herbs. *Seven* to *twelve* parts of water should be added to *one* of the gas liquor, according to its strength. White hellebore will destroy the gooseberry caterpillar; also a mixture of *fresh* soot and ashes scattered over the bushes early in the morning, when the dew is on, or just after a rain. It is important that the soot and ashes be *fresh and strong*, otherwise they do no good. The mixture likewise is of assistance to the growth of the bush and fruit.

Fastolf Raspberry.—This fruit seems to merit all the commendations heretofore bestowed upon it. It is of great size, and of a rich flavor, far exceeding other new large varieties; the plants bear abundantly, and in long succession.

THE AMERICAN AGRICULTURIST.—We see a handsome notice of our periodical, and quotations from it in the Gardener's Chronicle, for which we are greatly obliged. The Chronicle is edited by Professor Lindley, and has the largest circulation of any horticultural paper in England. It is the most varied in its contents, and upon the whole, we think the best and most able periodical of the kind in Europe. The Gardener's Magazine, edited by Professor Loudon, stands next. Both are highly worthy of the patronage of the American public, as will be seen by our frequent quotations from them under head of Foreign Agricultural News.

ATHENÆUM.—*The Respiration of Leaves.*—From numerous experiments, Mr. Pepys finds that in leaves which are in a state of vigorous health, vegetation is always operating to restore the surrounding atmospheric air to its natural condition, by the absorption of carbonic acid and the disengagement of oxygen: that this action is promoted by the influence of light, but that it continues to be exerted, although more slowly, even in the dark. Secondly, that carbonic acid is never disengaged during the healthy condition of the leaf. Thirdly, that the fluid so abundantly exhaled by plants in their vegetation is pure water, and contains no trace of carbonic acid. Fourthly, that the first portions of carbonic acid gas contained in an artificial atmosphere, are taken up with more avidity by plants than the remaining portions; as if their appetite for that pabulum had diminished by satiety.

Medical Properties of Roots and Leaves are best preserved by drying in their entire state without slicing, &c. In this way their juices are not near so much exposed to the action of the atmosphere.

NEW FARMER'S JOURNAL.—*Agricultural Colleges.*—It is proposed by the farmers of Gloucester, Oxford, Wilts, and Berks, to establish a college in the vicinity of Cirencester, with an example farm of 400 to 600 acres, for the education of the sons of farmers. Half of the day will be devoted to study by the scholars, and the other half at work on the farm and in the garden. Liberal subscriptions have been made for this purpose, and it is contemplated raising £12,000 in shares of £30 each, the capital to be applied to the erection of school-buildings, improvement of the farm, purchase of stock, implements, &c.

Large South-Down Sheep.—Mr. Drake of Stockbridge recently killed a pure Down, 5 years old, which weighed 195 lbs., including the rough fat.

Twin Colts.—A mare belonging to Mr. Thomas Hills, of Bullbridge farm, Bethersden, foaled this spring two colts, which are now two months old, and remarkably thriving. The breeders of horses in this neighborhood declare that they never knew such an occurrence before—in the rare case of twin colts, one is invariably still-born, or dies soon after birth.

A Prolific Sow.—A few days since a sow belonging to Mr. Thomas Bishop of Yalding, farrowed 22 pigs, she having previously produced 16, 19, and 20, at three preceding litters, thus making the extraordinary number of 77 pigs in four farrows.

Prevention of the Fly in Turneps.—In the Silurean we find that the fly in turneps may be prevented by dividing the seed intended for one day's sowing into two equal parts, and putting one part to steep in a vessel containing soft pond, or ditch water, the night previous to its being used. Next morning mix the whole together, and add to each pound of seed two ounces of flour sulphur. This mode will ensure two successive growths, and the fly will not touch them. It has been adopted with success for many years by the intelligent farmers in the southwest of Scotland.

Great Fleece.—The Nottingham Journal gives an account of a fleece of a two-year-old sheep, weighing 15¼ lbs. The Doncaster Gazette gives an account of another fleece, recently sheared from a yearling sheep, belonging to Mr. John Proctor, of Tunstal, which weighed 16 lbs. The wool was 19 inches long.

To Remove the Taste of Turneps from Butter, in Winter.—Mr. Ballantine adds hot water enough to the morning and evening's milk, to bring the whole to the temperature of 65°, and then churns it. He prefers, after thirty years experience, butter to be made from the milk instead of the cream, and says that it will yield 5 per cent. more. This accords with the practice of some, if not most of our Hudson river dairymen, they churning entirely from the milk.

Experiments and Observations on the Production of Butter.—We find in the Transactions of the Highland Ag. Soc. of Scotland, an interesting account, by Professor Trail, of eight series of experiments in the production of butter. They occupy 10 pages, but we have room only for the principal results.

1. That the addition of some cold water during churning facilitates the process, or the separation of the butter, especially when the cream is thick and the weather hot.

2. That cream alone is more easily churned than a mixture of cream and milk.

3. That butter produced from sweet cream has the finest flavor when fresh, and appears to keep longest without acquiring rancidity; but that the buttermilk, so obtained, is poor, and small in quantity.

4. That scalding of the cream, according to the Devonshire method, yields the largest quantity of butter; which, if intended for immediate use, is agreeable to the palate and readily saleable; but if intended to be salted, is most liable to acquire, by keeping, a rancid flavor. The process of scalding is troublesome; and the milk, after the removal of the cream, is poor, and often would be unsaleable from the taste it has acquired from the heating.

5. That churning the milk and cream together, after they have become slightly acid, seems to be the most economical process on the whole, because it yields a large quantity of excellent butter, and the buttermilk is of a good quality.

6. That the keeping of butter in a sound state, appears to depend on its being obtained as free from uncombined albumen, or casein, and water, as it can be, by means of washing and *working* the butter when taken from the churn.

Editor's Table.

NOTICES OF THE PRESS.

IMPORTANT TO FARMERS AND GARDENERS.

J. Winchester, 30 Ann street, New-York, has just published in a neat octavo form of 64 pages, printed on fine paper, and illustrated with numerous engravings, the **American Agriculturist Almanac**, for 1844, edited by A. B. Allen, assisted by an association of eminent agriculturists. This important and valuable work has been in preparation for four months past, and is unquestionably the most complete, in all its departments, of any Almanac ever got up for Farmers. It is calculated alike for the Northern, Middle, and Southern States, and for the Canadas; and consists entirely of *original matter*, by the best practical writers on Agriculture in this country. This Almanac comprises,—1. Astronomical observations and tables calculated for the meridian of Montreal, Boston, New-York, Philadelphia, Charleston, and New Orleans. Also, valuable Statistical Tables. 2. A complete Northern Calendar for every month in the year, embracing all necessary directions for the management of the farm, garden, and orchard. 3. A complete Southern Calendar for the plantation, &c., &c. 4. Miscellaneous matter, such as is designed to advance the interests and improvement of the Planter, Farmer, Stock-breeder, and Horticulturist. Notwithstanding the labor and expense bestowed upon the **Agriculturist Almanac**, in order to obtain for it the largest circulation, and be more acceptable to the community, it is published at the low price of 12½ cents per single copy, and $8 a hundred.

New England Farmer.—This old and favorite periodical has commenced its XXII. Volume. It is edited by Rev. Allen Putnam, and published by Joseph Breck & Co., No. 52 North Market street, Boston, Mass. It is a large quarto of 8 pages, weekly, price $2 a year. If we are not mistaken, this stands next in age to the Baltimore Farmer, and has always been favorite reading with us. It is well edited, and has an able corps of contributors, among whom is Dr. Samuel L. Dana. On an excursion into Connecticut recently, we had the gratification of meeting the editor, Mr. Putnam, who was also on his rural travels. We wish the New England Farmer 22 more years of successful life.

The Farmer's Mine; or Manures and Tillage, by H. Heermance of Kinderhook; Saxton & Miles, 205 Broadway. This is one of the most valuable works on manures and the improvement of the soil, which has been issued from the press for a long time. It is a compilation in part from all the best authors of the present day, together with much original matter, showing the farmers the real treasures in their own possession, which they have only to properly save and apply, to increase their wealth and independence to a very high degree. To show the great value of this admirable work, we have given on page 164 an extract on the subject of making manures, a knowledge of which alone will be worth many times the cost of the book, to any farmer practising this method of increasing the fertility of his land. The reader will find much more equally valuable matter in the Farmer's Mine, and we bespeak for it an attentive perusal. Mr. Heermance has been for some time a practical and scientific agriculturist, in this immediate neighborhood, and recommends nothing the value of which he has not himself tested.

Hunt's Merchants' Magazine, edited by Freeman Hunt. A monthly periodical of 96 pages 8vo. each No., published at 142 Fulton street, New-York, at $5 a year—established in 1839. It is devoted chiefly to the affairs of trade and commerce, both foreign and inland; agriculture, manufacture, mercantile, and marine law; insurance, railroads, canals, steamboats, population, &c., &c. The work is conducted with ability, and is well worthy of patronage. Its statistics are particularly valuable. They are collected with much labor and arranged with care,

The Farmers' Manual, a Practical Treatise on the Nature and Value of Manure, founded from experiments of various crops, with a brief account of the most recent discoveries in Agricultural Chemistry, by F. Falkener, Esq., and the author of British Husbandry. D. Appleton & Co., 200 Broadway.—158 pages duo. price 31 cents. This is a republication on manures which has recently been issued from the English press. Its motto, "Muck is the Mother of Money," is well illustrated, in clear, forcible language, divested as much as possible from all technicalites. We trust that this little work will have a large sale.

The Farmers' Cabinet and American Herd Book, published monthly by Josiah Tatum, Editor and Proprietor, No. 50 North Fourth street, Philadelphia, 32 pages, double columns, octavo, price $1 a year. We are glad to welcome No. 1 of Vol. VIII. of this excellent periodical. Its paper and type as usual are quite handsome, and it has in addition a new vignette, together with other embellishments in the body of the work. The contents generally we highly approve, and trust that the Cabinet will continue to receive a handsome support, for it has done much good to the cause of Agriculture.

Leibig's Agricultural and Animal Chemistry, a new edition, James M. Campbell, Philadelphia; Saxton and Miles, New-York. This is a new and very handsome octavo edition, on good paper and a clear bold type of these standard works, published at the low price of 25 cents each, or 50 cents for the two, in paper covers stitched. It is unnecessary for us to add one word as to the value of Leibig's works, for they are justly considered the first of the age on the subjects of which they treat.

The Health Almanac for 1844, is one of the cheap publications just issued by Saxton & Miles, 48 pages duo. We have found time to glance over a few of the articles, and these strike us as of the best character.

Economy of Farming, translated from the German of Prof. Burger, by Rev. E. Goodrich Smith. This valuable work is now out in a handsome octavo of 132 pages, price 50 cents. We gave so full a notice of it last month that it is unnecessary to do any more than merely announce the fact.

The Boston Traveller. It strikes us as somewhat unfair to be repeating at this late day, the foolish misconceptions of the correspondents of the Albany Cultivator in regard to Ayrshire cattle, without at least giving us the benefit of an explanation which appeared over our signature, page 97, June No. of that paper last year. The principal one in those attacks, has voluntarilly called upon us acknowledging that he was wrong, and we were right When and where does Mr. Allen say "he admits, however if a native cow of the Ayrshire stock 50 years ago could be found, a near approximation might be obtained by this cross?"

To Correspondents.—T. A. E. Very much obliged indeed for the basket of Apricots. They proved a first rate dessert, and were highly relished.

We had so long an article to publish upon sheep by Americus that we let Mr. Jewett's communication stand over till next month. We shall in the mean while hand Examiner a proof of it, so that the letter and rejoinder can appear together in the same No. We think that the interest will thereby be increased in this subject.

S. S. is received. J. C. P. in our next.

E. H. will find his queries answered in this No. This is essentially the same thing, and equally as good a method.

W. H. S. is at hand. We shall write him soon.

D. J. Browne, No. 3, will appear in our next.

P. is received but too late for this month. It shall see the light in October. Has the F. R. stopped? We have not seen a No. for three months. This will make no difference about ours in exchange, as we shall be happy to continue it so long as any satisfaction is derived from its contents.

G. F. We can only answer by repeating the old English saying:—

> Marl sand and you will buy good land;
> Marl moss and you will have no loss:
> But marl clay, and you'll throw all away.

G. A. C. We do not think anything of the wheat you mention, and shall therefore defer filling your order.

AGENTS FOR THE AMERICAN AGRICULTURIST

John Halsall, Bookseller, St. Louis, Mo.
G. S. Taintor, Bookseller, Natchez, Miss.
Norman Steele & Co., New-Orleans.
Saxton, Peirce, & Co., Boston.
R. H. Hendrickson, Middletown, Ohio.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, AUGUST 28, 1843.

ASHES. Pots,	per 100 lbs.	$4 37	to	$4 50
Pearls,	do.	5 31¼	“	5 37½
BACON SIDES, Smoked,	per lb.	5½	“	6
In pickle	do.	5	“	5½
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	22 00	“	24 00
BARLEY	per bush.	46	“	48
BEANS, White	do.	1 12½	“	1 25
BEEF, Mess	per bbl.	7 87	“	8 25
Prime	do.	5 75	“	6 25
Smoked	per lb.	7	“	7½
Rounds, in pickle	do.	4½	“	5½
BEESWAX, Am. Yellow	do.	28	“	30
BOLT ROPE	do.	12	“	13
BRISTLES. American	do.	25	“	65
BUTTER, Table	do.	12	“	15
Shipping	do.	6	“	10
CANDLES, Mould, Tallow	do.	9	“	12½
Sperm	do.	28	“	35
Stearic	do.	19	“	24
CHEESE	do.	4	“	7
CIDER BRANDY, Eastern	per gal.	40	“	45
Western	do.	28	“	33
CLOVER SEED	per lb.	7	“	8½
COAL, Anthracite	2000 lbs.	4 75	“	5 50
Sidney and Pictou	per chal.	6 00	“	6 25
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	59	“	60
Southern	do.	56	“	58
COTTON	per lb.	5½	“	11
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	15	“	16
FEATHERS	per lb.	20	“	30
FLAX, American	do.	7	“	7½
FLAX SEED, rough	per 7 bush.	9 00	“	9 37½
clean	do.	— —	“	— —
FLOUR, Northern and Western	per bbl.	4 75	“	5 25
Fancy	do.	5 50	“	5 75
Southern	per bbl.	4 75	“	5 00
Richmond City Mills	do.	6 25	“	— —
Rye	do.	3 00	“	3 25
HAMS, Smoked	per lb.	5½	“	7½
Pickled	do.	4	“	5½
HAY	per 100 lbs.	45	“	50
HIDES, Dry Southern	per lb.	10	“	11
HEMP, Russia, clean	per ton.	195 00	“	200 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	11	“	15
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	8
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 87½	“	3 25
Corn	per hhd.	14 00	“	14 50
MOLASSES, New Orleans	per gal.	29	“	31
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	27	“	30
Southern	do.	23	“	25
OIL, Linseed, American	per gal.	80	“	85
Castor	do.	60	“	65
Lard	do.	60	“	65
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	1 75	“	2 25
Ground, in bbls	per cwt.	50	“	— —
PORK, Mess	per bbl.	10 50	“	11 50
Prime	do.	9 12	“	10 12
RICE	per 100 lbs.	2 75	“	3 00
ROSIN	per bbl.	65	“	1 00
RYE	per bush.	67	“	67½
SALT	per sack	1 40	“	1 50
SHOULDERS, Smoked	per lb.	4	“	4½
Pickled	do.	3	“	3½
SPIRITS TURPENTINE, Southern	per gal.	38	“	40
SUGAR, New Orleans	per lb.	6½	“	7½
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6¼	“	7¼
TAR	per bbl.	1 50	“	1 75
TIMOTHY SEED	per 7 bush.	16 00	“	17 00
TOBACCO	per lb.	3	“	7
TURPENTINE	per bbl.	2 12	“	2 50
WHEAT, Western	per bush.	1 00	“	1 02
Southern	do.	1 00	“	1 02
WHISKEY, American	per gal.	23	“	25
WOOL, Saxony	per lb.	35	“	60
Merino	do.	30	“	35
Half-blood	do.	25	“	27
Common	do	18	“	22

New York Cattle Market—August 28.

At market, 500 beef Cattle, fresh, (150 southern,) 30 Cows and Calves, and 300 Sheep and Lambs.

PRICES.—*Beef Cattle.*—In consequence of the rains, the offerings have been very small, and prices of last week very readily paid, with occasionally an advance, which, however, was not long sustained. Sales at $3 75 *a* $5 to $5 75 and $6 for prime Cattle.

Cows and Calves.—All taken at $16 to $25.

Sheep and Lambs.—The market was cleared at $1 25 *a* $3 for Sheep, and Lambs from $1 12½ to $2 25.

Hay.—Sales at 62½ *a* 68 per cwt. for loose by the load.

REMARKS. *Ashes* still continue in active demand for export. *Coal* is in request, and a light stock on hand. *Cotton* has advanced altogether the past month, from ½ to ¾ of a cent per lb., and it still has an upward tendency, with an active business doing in it. According to our best advices, the crop will undoubtedly fall short of that of last year, at least 300,000 bales. This is owing to the cold, backward spring, the overflow of the Mississippi and some of its tributaries, and the deluging rains the past summer. Exports since 1st September last year, 2,000,769 bales; same time last year, 1,454,296; same time year before, 1,306,806. *Flour*, considerable quantities have been shipped recently to England; the tendency of prices, however, at this moment, is downward, nor can they be maintained unless the present wheat crop prove a short one abroad. *Grain*, a fair business is doing in all kinds. *Corn* scarce and advancing. *Hay*, there is a prospect of advance; the crop has proved quite short in this vicinity. *Molasses* and *Sugar* are firm and prices still upward. *Naval Stores* in good demand. *Spirits Turpentine* scarce. *Provisions* of all kinds are in request, and the old stocks on hand nothing like as heavy as last year at this time. We think the Beef and Pork markets will open well at the west this season. *Rice* without change. *Tobacco* firm, with an upward tendency. *Wool*, large sales. We see little alteration in prices since our last, when we stated that it had risen full 25 per cent. since May.

Money, 3 to 4 per cent. on good paper, 6 to 7 per cent. on bond and mortgage. It is just as plenty as ever, and it is reckoned there are full twelve millions lying in banks in this city waiting investment.

Stocks are generally advancing, and we think all good ones will continue to do so for some months yet. *Money* is worth only 1 to 2 per cent. at present in England, and we are of opinion under these circumstances prejudice will give way, and *first class* American stocks again find favor abroad.

Crops.—The rain has been abundant the past month, and grass and fall crops are looking extremely well. All summer crops have been a good average taking the country through, especially in wheat and the small grains.

Business generally is very good; the fall season opening with great activity, and our city crowded with customers. We see no further reason for a complaint of hard times—the future never appeared to us more auspicious.

SOUTH-DOWN AND LONG-WOOLLED SHEEP FOR SALE.

Will be sold at Auction on Thursday the 23d of October next, at 11 o'clock A. M., at Coldenham, 8½ miles west of Newburgh, about 70 head of South-Down Sheep, consisting of Bucks, Ewes, and Lambs. They are all bred from stock selected from the most celebrated flocks in Sussex, England, and imported by the subscribers.

Also 30 head of choice Long-Woolled Sheep, several of them imported.

S. & J. WAIT.

Coldenham, August 24, 1843. 2t

CHEAP CASH BOOKSTORE,

205 BROADWAY, NEW YORK.

Saxton & Miles, Publishers, and dealers in Books in every department of Literature, at very reduced prices for *cash*.

S. & M. publish the following Book, which should be in every family in the United States: GUNN'S DOMESTIC MEDICINE, or the Poor Man's Friend.

Among the many publications of more than doubtful utility, with which our presses groan, it is pleasant to offer to the public one which, while it can not injure the mental and moral powers, is capable of improving our health and prolonging our days. It is now about ten years since this work was first published, since which time it has passed through many large editions, and the astonishing number of *one hundred thousand* copies has been sold in the southern and western states, and the demand is increasing.

It has just been revised and corrected, containing 900 pages, and executed in superior style. People may be disposed to smile when we tell them that they can save money by purchasing this book, but we think we can satisfy them that such is the fact. In every family more or less is paid yearly for doctor's bills. A child is taken with a fever, or some other complaint, and from ignorance nothing is or can be done effectually to check it. The physician is called, and a large bill is contracted; whereas, had GUNN'S DOMESTIC MEDICINE been on hand, a remedy could easily have been found which would have checked the disease in its first stage, and not only have saved the purse, but perhaps the life.

AGRICULTURAL INSTITUTE,

BRIDGEPORT, CONNECTICUT.

The Rev. B. G. Noble proposes to establish an Agricultural Institute, on his Farm in the town of Bridgeport, Connecticut. The Location is on the east bank of the harbor, within a few minutes walk of the churches, surrounded by agreeable rural scenery.

The full course of instruction will embrace the natural sciences, with their application to agriculture, and all the branches of a finished English education.

The winter term will commence on the first Wednesday of October, and the summer term on the first Wednesday of May. The spring and autumn vacations will be each four weeks.

Expenses. For Board, Tuition, Washing, and Fuel, will be for each term of twenty-two weeks, $80.

Payment to be made for each term in advance.

The pupil should be provided bed and bedding. Application to be made to the Rev. B. G. Noble, Bridgeport, Connecticut, or to the Editor of the American Agriculturist. 2t

FARM TO LET.

Wanted to let on shares a Farm of 480 acres, 80 of which are well fenced and under good cultivation. It is well stocked with horned cattle and horses, and has a good supply of farming utensils, a two-story frame house, and large barn. The land is of the best quality, and well watered by two never-failing streams. It lies in a perfectly healthy region, on a high rolling prairie, 18 miles from Springfield, the capital of the State, and 35 miles from Pekin, on the river Illinois. The person making application for it must be a man of family, possess some capital, and give satisfactory reference as to character.

Apply *post paid* to the Editor of this paper, 205 Broadway, New York. 1t

Prince's Descriptive Catalogue of the Linnæan Botanic Garden and Nurseries at Flushing.

This extensive publication is now in press, and will be speedily issued, and sent to every *post-paid* applicant. It comprises ample descriptions of all the estimable varieties of Fruit Trees cultivated in the Nurseries of the Establishment, also a list of the *bad and inferior* varieties of every class that have been rejected during the long period of investigation, more than 200 of which are still unwittingly cultivated in various collections. The Catalogue may be obtained *gratis* at 70 Nassau street, and orders for Trees, &c., per mail, will receive prompt attention.

WM. PRINCE & Co.

Flushing, Aug. 26, 1843. 2t

Sale of Durham Cattle, Hereford Bulls, and South Down Sheep.

The subscriber, desirous of reducing his stock, will offer for sale at auction, on Wednesday, the 13th of September next, at 10 o'clock *a. m.*, at Three Hills Farm, 3½ miles west of the city of Albany, on the Cherry Valley road, 25 head of cattle, consisting of bulls, cows, heifers, and calves, and between 70 and 80 head of South Down sheep, comprising bucks, breeding ewes, yearlings, and lambs, bred from the stock imported by Mr. Hawes, in 1832, and from bucks imported since.

Messrs. Corning and Southam will also offer at the same time and place, some of their celebrated Hereford bulls of different ages.

C. N. BEMENT.

Three Hills Farm, Albany, June 1st, 1843.

SHORT-HORN DURHAMS.

Three or four Durham Heifers, one and two years old, and three young Bulls, from 10 to 13 months old, are offered for sale by the subscriber. Some of these young animals are got by his imported Bull, Duke of Wellington, bred by Thomas Bates. Esq., of Kirkleavington, England. The stock of Wellington will carry its own recommendation. The two-year-old Heifers are, and will be in calf, by Wellington, or his son Meteor, out of his imported Heifer, Dutchess, which latter animal was also bred by Mr. Bates. and got by his prize Bull, Duke of Northumberland. Inquire of A. Cluckie, on the farm, or of the subscriber, at his residence in Troy.

GEO. VAIL.

Troy, July, 1843—2t.

CHARLES STARR, Jr.,

MENDHAM, MORRIS COUNTY, NEW JERSEY,

Is prepared, at the present time, to execute orders for thorough-bred Berkshire Pigs, from the imported boar Hagbourn, and a superior boar of Windsor-castle family, and fifteen choice sows, lately procured from A. B. Allen, of Buffalo, New York.

Pigs from this superior stock, from 2 to 3 months old, will be delivered, well caged, on shipboard, at New York, for $25 to $30 per pair. Feed furnished, when desired, at $3 per barrel.

Persons desiring either pigs or full-grown animals, can be supplied with all the advantages of Mr. Allen's stock at Buffalo, without incurring the risk and cost of canal transportation—the advertiser's residence being but half a day's journey from New York.

THE AMERICAN AGRICULTURIST.

Published Monthly, each number containing 32 pages, royal octavo.

TERMS—One Dollar per year in advance; single numbers, Ten Cents; three copies for Two Dollars; eight copies for Five Dollars.

Each number of the Agriculturist contains but One sheet, subject to newspaper postage only, which is *one cent* in the State, or within 100 miles of its publication, and *one and a half cents*, if over 100 [illegible] the State.

Advertisements [illegible] inserted at One Dollar, if not exceeding twelve lines, and in [illegible] same proportion, if exceeding that number.

☞ *Remit through Postmasters, as the law allows.*

Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume 1 of The American Agriculturist, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on bu[illegible] disconnected with the paper, should be addressed, simply, [illegible] Allen, 205 Broadway. New York.

WHEAT-SHEAF FARM ON STATEN ISLAND FOR SALE.

A recent domestic bereavement has induced the undersigned to offer his residence on Staten Island for sale. It is situated midway of the outer bay, on the sea-shore, eight miles from the Quarantine ferry, three from that of Rossville, and equi-distant from two others—Seguin's landing, and Port Richmond.

The condition of the Farm, the extent, value, and practical usefulness of the improvements, and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upward each, including an appropriate allotment of woodland; each division offering a moderately elevated building location. The condition of the soil is well known to be in the best working order.

Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product.

W. A. SEELY,

New York, Feb. 16, 1843. 218 *Fulton street.*

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. II. NEW YORK, OCTOBER, 1843. NO. VII.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

BUCKWHEAT STRAW.

As this is the month when buckwheat is usually cut and threshed at the north, we have thought that a word or two as to the value of its straw might not be amiss. It is customary with many to burn this straw, because, on account of its coarseness, they think it quite worthless. This is a great mistake. Properly cut, cured, and stacked, we have found it of considerable value as fodder in the middle of the day in winter, when cattle are turned out of their stables for exercise. At this time they will usually eat up a moderate quantity of the straw with considerable relish. In stacking buckwheat straw, it should be carefully capped with some other straw—rye we think the best, for left in stack without some protection of this kind, it is so coarse of itself, that the water easily percolates through to its injury. Of course it makes good bedding in the stable, and excellent manure, and will quickly and easily decompose if made one of the materials of the manure-heap, as recommended in the new method on page 164 of our last number. Another useful purpose to which it may be put, is to let it stand in stack till the following hay-harvest, and then mix it in equal parts with clover, in alternate layers as it is packed away in the barn. In this way, clover can be put up with much less curing, and the straw will become impregnated with its juices, and all will be eaten with avidity the following winter. Salt should always be added to the clover and buckwheat straw in packing it away, at the rate of four to six quarts at least per ton. Perhaps eight quarts might be still better.

KEEPING APPLES.

The ordinary method of stowing apples away in the bins of cellars is a very good one for family purposes, especially if the cellars be cool and dry in the warmer months, and of a temperature above the freezing point in winter. The best method, however, which we have found of keeping apples, is to pick them by hand from the trees in dry weather, as soon as sufficiently ripe, and pack them in clean barrels, being very careful at the same time to prevent their getting bruised in so doing. Head them up tight from the air immediately, and place them in any cool, dry place, with the temperature as near 40 or 45 degrees as possible. In this way we have known them to remain perfectly sound for more than a year, and it is thus packed that they best bear transportation at sea. As soon as we get a line of steam-ships to cross the Atlantic from this city to Liverpool in ten to twelve days, (which will undoubtedly be the case in a very few years,) good apples will become quite an article of export; instead, therefore, of allowing their orchards to go to decay, as many, we are sorry to find, are doing in this neighborhood, the production of good selected fruit should be more and more the study of the farmer, especially if he be the proprietor of only a small estate. Apples are undoubtedly worth raising even to be fed to pigs; and how much they contribute to the comforts and luxuries of the table, we need not say.

The varieties of apples to be grown on the farm need not be great; some twenty or at most thirty kinds for the summer, fall, and winter, would probably embrace all that are particularly desirable for family use. These should be well approved kinds, known as such by actual tests in our climate; for these greatly change by transplanting, not only from foreign countries, but even in our own diversified territories. We have repeatedly seen apples which were very superior in the northern and eastern states, prove quite ordinary on being transplanted to the west and south, and a knowledge of this fact should operate as a caution to those who purchase at our nurseries, not to be over hasty in condemning everything which does not answer the description given it where first produced.

RULES FOR IMPROVEMENT IN BREEDING STOCK.

The rules for breeding all kinds of domestic stock, whether the horse, the ox, the sheep, or the pig, are very simple; the judgment, however, required in making selections and coupling animals together, with a view of *continued improvement*, can only be acquired by persons possessing an innate talent for the thing, and long personal experience in its practice. Still, every one who is disposed may effect something, and for their guide we merely give in a few words the long adopted principles of the most eminent breeders of domestic animals.

1. When better materials do not exist, or the person wishing to make the improvements has not the means of going abroad for so doing, choose from the *best natives* at hand for this purpose.

2. But when it is possible to do so, obtain *thorough-bred* males of the proper kind from superior improved stocks, to cross on to the native females, and so continue breeding up the grade females to the thorough-bred males.

3. Be very careful in a thorough-bred stock to use no male which is not at least *equal* to the females, and if he can be found *superior*, so much the better, for this will ensure still further improvement, if possible, in the progeny.

In various communications to the agricultural journals for the past five years, we have repeatedly urged on the farmers of our country the practice of the first and second rules above; for in following them, great and decided improvements may be made at a very cheap rate. What our countrymen most fail in, except in New England, where the beautiful reds predominate, is a want of *uniformity* pervading their stocks. Animals look much better together when they match; that is, that all shall be as near alike as possible in size, in shape, in color, in their horns, and in their *general* expression. Thus formed, they reflect a beauty on each other; and although they may command no particular attention single, yet as a body they will excite respect, and if pretty good, not unfrequently admiration; for they denote at least, that there is an established system in their breeding. In Europe these incongruities do not so generally prevail. In one district, the traveller observes that the animals are nearly all black, *without* horns; in another, they are uniformly the same color, *with* horns; a few miles beyond, and we find them suddenly changed to a pure red; again, they may be white; and further they appear in mixed colors, though still preserving a uniformity, as in the case of the Italian, Swiss, Dutch, Jersey, Ayrshire, Hereford, and Durham cattle.

STOCK ON LONG ISLAND.

The farmers on this island as we remarked in our last, devote their lands almost exclusively to the production of hay and garden vegetables for the city market; raising stock, therefore, among them is no great object, especially at the present low prices. Still, when there are so many wealthy men, they will indulge their fancies in this sort of thing as well as in fine houses and furniture.

Horses.—There were formerly a considerable number of thorough-bred horses kept here, but since the decline of racing, these have mostly been sent to the south and west. Good trotters were also bred to a considerable extent on the island, yet even these useful animals, owing to the high price of hay and grain a few years ago, have pretty generally followed the course of the thorough-breds, and we know but one good trotting stallion at present kept there, and that is the celebrated Abdallah. He is a horse of good size, of a rich bay, possesses a stylish action and great bottom. His colts prove fast, though the most of those we have seen are not quite as large as are sought for in carriage horses; but this deficiency in size, we were told, was the fault of their dams, for when bred to more roomy mares, the offspring proved all one could desire in this respect. There are a few fine colts of Abdallah's at present on the island, which, if taken to the western states, would greatly improve the road-stock of that country.

CATTLE.—Quite a number of high-bred cattle from England have been introduced here, principally by the captains of the New York packet-ships; but as it is not a breeding country, they have not increased much, if any. The Jersey cows to some extent have also been introduced, and owing to the richness of their milk they are much liked as family cows. Were they a little hardier they would be great favorites in our eyes, as we have before stated in Tour in England No. 14. A cross of these with the Short-Horns is much esteemed on Long Island, and proves sufficiently hardy for that climate. This cross makes a prettier animal than we expected it would, being considerably improved in the crop, and the quarter, and yet retaining much of the cleanness of limb, fine, short, waxy, turned up horns, and beautiful eyes and head of the original Jerseys. Indeed so highly pleased are we with the few specimens we have seen, that when we change our farming to land again as well as on paper, it is our intention to get a few Jersey cows to experiment with in breeding to a peculiarly fine, small-sized Durham bull. We are now satisfied for family cows on light land such a cross-breed as this would prove a valuable one. Perhaps, however, we are over enthusiastic in favor of the blood-like limbs of the delicate Jerseys.

SHEEP.—Some years ago the Merinos existed here to considerable extent; they have, however, from various causes, given away for the last few years to crosses of the Leicesters and South-Downs. Mutton being now more an object of production among the Long Island farmers than wool, we found the South-Downs more highly esteemed there than any other breed.

POULTRY.—Peahens and Guinea-hens, geese, ducks, and barn-door fowls, exist in an almost endless variety; and true to American genius, instead of being kept in their distinct original breeds, they are usually crossed in all sorts of ways, so that it is difficult to tell what is what. Truly we are a singular people: being a cross breed ourselves from so many nations of the earth, we seem disposed on every occasion to make our animals like unto us. We wish a law could be passed against this matter of crossing; and yet, here we have just been sinning with our own pen, by purposing the mingling of Durhams and Jerseys.

A MILK DAIRY.—Our excursions on Long Island did not extend to the farming dairy districts, which it always gives us so much pleasure to visit; but in Brooklyn, near Furman street, we encountered one in the *distillery* district which we consider a complete *nuisance*. The buildings there formerly held 1,000 cows, we rejoice to say now, that the numbers are reduced to one half—but these are just 500 too many. The cows are fed upon still slops, and the milk is retailed in this city under the false names of "pure milk," "Orange county milk," "grass-fed milk," "Connecticut milk," &c. Still-fed milk we consider a pernicious drug, and exceedingly deleterious to children. The sale of it ought to be prohibited under the strictest penalties.

The arrangement of the buildings at this milk dairy is commodious, and everything seemed to be kept in as good order as it is possible under the circumstances of the case; yet, notwithstanding, it was a foul, loathsome place to us, and glad were we when well clear of the premises. How different we thought from the pure atmosphere of the country, and the sweet green herbage of its pastures. All ought to rejoice that the facilities of railroads and steamboats make it easy to procure milk fresh from the country, and at a moderate price; we trust that the *pure* article will be kept at such a rate as to defy competition, and make it no longer an object to adulterate and palm off an inferior and injurious quality; still every purchaser should continue upon his guard, and be careful that he goes to such depots in the city as will not deceive him.

GARDENS FOR MELONS, &c.—The most celebrated of these are at the west end of Long Island, on the road from Brooklyn to Fort Hamilton, bordering the New York bay, where hundreds of acres are devoted exclusively to cucumbers, squash, and melons. The soil is so poor and sandy, that the gardeners are obliged to sow such parts as they have cultivated the preceding summer to rye or wheat in the fall, to prevent its being blown away during winter. Such land would scarcely be considered worth cultivating for farm purposes; but for market gardens, and especially in the vine department, it answers admirably. Those who till it, make a net profit of from $25 to $100 an acre, and frequently a good deal more than even this highest sum mentioned. We hope to be able to give full particulars of these garden crops soon; their value, rotation, method of cultivation, manures, &c. Those of the Messrs. Bergen are the most extensive we visited. They have a green-house, extensive ranges of hot-beds for forcing, and crops of all kinds of vegetables that will grow in a northern garden; a nursery also and flower garden. The collection of dahlias in this last is one of the richest and most varied which we have seen.

NEWSTEAD ABBEY.—(FIG. 47.)

Seat of the Late Lord Byron.

IN our May number we gave the terrace view of this noble mansion; we now present our readers a second illustration taken on the side fronting the lake. Its present owner, Col. Wildman, spent nearly half a million of dollars in restoring it, building commodious farm-houses for his tenants, and improving the estate. Byron characterized it as

> "A rich and rare mixed Gothic."

Newstead Abbey is considered one of the noblest specimens of this style of architecture in England, and might be copied from with effect in building up squares in a city, but is of too vast an extent for the more moderate fortunes of those in the country, and happily for us it is so.

FARM OF G. G. HOWLAND, ESQ.

THIS admirable farm is situated about one mile from Flushing, Long Island, and contains about 300 acres. Exclusive of the salt meadows, the soil originally abounded with rock, and was quite ordinary, scarcely producing a ton of hay to the acre; but by a judicious rotation of crops, and a skilful application of manures, in the space of a few years the products have been increased at least three-fold. The main crop is hay; the rotation is consequently adopted to the greatest production of this article, and is thus: First year, the soil is broken up, the land well manured, and planted with corn. Second year, it receives another coating of manure, and is put into potatoes. These are dug in September sufficiently early to sow wheat. Timothy is put in at the same time, and clover seed is added early in the spring. The wheat crop is harvested the third year, and the land then remains in grass about five years or more if it holds well, the meadows generally receiving a top dressing of compost every season.

We visited this farm early in July; the rows of corn and potatoes were as straight as one could draw a line, the growth forward for the season, heavy and even—almost every hill exactly alike. The wheat and other grain looked well; but the grass, when we consider the number of acres it occupied, was one of the most astonishing products we ever saw. It was nearly ready for cutting, and the timothy and clover were as thick seemingly as they could possibly grow, the farmer waist high. It was not a patch here and another there, but at least 80 acres so near alike, that one square rod would hardly differ from another over the surface. The season had been quite dry and unpropitious for grass; yet, nevertheless, we can safely say, that these fields would average three tons to the acre, weighed as fast as it was taken from the field to the barn. A friend who accompanied us on our visit, and an accurate judge of such things, estimated that one field of 18 acres would average four tons to the acre. It certainly was a most extraordinary growth, and showed emphatically what Long Island land can do when well managed. This hay is usually worth $10 to $12 per ton standing, or $14 to $15 in the New York market, thus making it quite a profitable crop.

The farm is handsomely laid out, and conveniently arranged; the fences principally stone wall, and made in the most durable manner—the foundation being laid one foot below the surface of the earth, so as not to be endangered by the heaving of the frost. The superstructure is quite thick, rises to a good height, and is handsomely faced on both sides. Along the division fences rows of fruit trees are generally planted. The cherries have grown to a lofty height, and several of the farm-roads present such superb avenues of them, that at a distance they have more the appearance of noble forest, than fruit-trees. The orchards are abundant, and present a great variety of the best selected apples, peaches, and pears.

MANURES.—Notwithstanding all the manure at home is carefully husbanded, still, in consequence of selling the hay from the farm, instead of consuming it on the ground, it has hitherto been necessary, in order to keep up the fertility of the land, to procure more or less from the city; but by draining a swamp which was formerly a great nuisance, large quantities of muck are now obtained, and either carted into the barn-yard to be mixed with stable-dung, or it is laid up in heaps of alternate layers mixed with one fifth to one third of its quantity of lime; thus making one of the best composts, especially for grass lands, and obviating the necessity of any further purchases for the present from abroad. The lime costs eight cents per bushel, the muck merely the hauling, and load for load, this compost is pronounced by many to be equal, if not superior, in its lasting properties to ordinary stable manure. Then the swamp furnishing this muck, when all that is necessary is taken from it, will be turned into a valuable meadow; so that the draining of it will operate as a three-fold benefit. In our rambles this summer, within a circuit of 100 miles from this city, we have seen thousands of acres now scarcely worth a penny a rod, which might be thus reclaimed at a moderate expense, and ever after form the most valuable part of the farm. Some action, however, we are glad to say, has commenced in this thing, and we are satisfied, that in frequent instances, if our farmers would drain their rich swamps instead of emigrating a thousand miles west for fertile lands, they would be *all the happier*, and *quite as rich* for their enterprise.

FARM BUILDINGS.—These are among the most complete we have ever seen, the barns and stables especially; nothing short, however, of an engraving of the ground-plan and superstructure can give a definite idea of them. They are quite extensive, and embrace three sides of a quadrangle, enclosing a commodious yard, open only to the south. The arrangements for saving and making manure, liquid as well as solid, and for manufacturing it also in the cow-yard, deserve all praise. Troughs are placed under the eaves of the whole range of buildings to catch the water and conduct it to a tank in the cellar, which holds 42,000 gallons. This furnishes water for the stock at all seasons, and has never been dry. It keeps perfectly sweet, as we can testify from a hearty draught which we took from the tank; and Mr. H. remarked, that when he wanted a *particularly good drink* of water, he always came here for it. But aside from furnishing the water for stock, the eaves-troughs should in all cases be appended to farm buildings in order to keep all the water which falls from the roof out of the yards, and from saturating the manures especially, as this is a great injury to them.

GUANO MANURE.—We have abstained from saying much upon this subject in our paper, notwithstanding the numerous articles which are constantly appearing in the agricultural journals of Great Britain about it, simply because we know it would prove too expensive a fertilizer for America to import, especially when we consider the great amount of wasted materials which are already to be found everywhere around us. Mr. Howland has imported some guano, and we believe agrees with us in opinion. It is a powerful manure, and produces a superior effect upon vegetation. He has made several experiments with it, and we hope to have an account of them in comparison with other manures, at the end of the season.

Stock.—The stock on this farm is merely such as is required for labor, and a dozen cows or so for family purposes, and a small dairy. These are principally a cross of the Durhams on the native. We observed one fine cow of the Holland or Dutch breed, from the stock imported direct from Holland by the late Mr. Leroy of this city. She is a noble cow of good points, and a good milker; her color approaches a purple black, mixed with patches of white. In form, these animals much resemble the best specimens of grade Durhams. A few cows of this breed may be found on the farms of Messrs. Le Roy and Newbold, Livingston county. These gentlemen have crossed them with the Durhams, and think highly of the produce.

The Dairy.—This we found a cool, neat, and convenient structure, and *well aired;* a point which is too often neglected in the dairy, but which is very essential in its products, and especially so in keeping the cheese in good order—close, foul air being pernicious in the extreme. A small stove is introduced here in the winter to bring the temperature up to a moderate warmth, and it has the effect of giving both the cream and the butter the rich yellow appearance which they assume in the summer.

A Pair of Industrious Dogs.—The churning is done by dogs, turning a wheel constructed in the usual form of those attached to machines of this kind. The animals we saw here are a noble pair of large shaggy fellows, that looked like a cross of the Newfoundland upon the water spaniel. They are the faithful guards of the farm by night, and the workers here when required by day, and such is their spirit of industry, that they occasionally have a battle so see which shall do the churning. We have heard of bipeds quarreling to *evade* useful work, but never knew of their doing so to be allowed to enact the opposite principle.

Five-Toed Capons.—We here saw a flock of capons which had just arrived from China. They are large birds, of a golden red color, and yellow legs. Four of them had extra toes, exactly like the Dorkings. We should like to ascertain whether these "children of the moon" were an accidental or an established variety of the gallinaceous species. We suspect that there are more good things in China than we have ever dreamed of, and probably we may yet learn that on many points we are the barbarians the inhabitants of the celestial empire style us. Now that this singular country has become partially open to travellers, we hope soon to see some accurate account of its numerous productions.

The gardens and grounds of this fine estate of Mr. Howland are ample, and well stocked with flowers, shrubbery, and ornamental trees. We should like to take the reader to the top of a pretty tower that crowns the hill of a recent plantation, and give him a view of the beautiful and varied scenery around; the East river, the Sound, the charming country and towns on their borders, with the heights of the palisadoes beyond; but such things are not in the province of this paper, and we forbear. From an eminent and successful shipping merchant, Mr. Howland has transferred himself to an equally eminent farmer, and judging from appearances, we presume that he takes more pride and pleasure in the latter occupation, than he ever did in the former.

THE BAMBOO.—(Fig. 48.)

Although the bamboo is a native of America, we have never heard of its attaining the same luxuriance of growth here that it does in Asia. Why is this, want of cultivation? We can not think either our soil or climate in fault. Mr. Loudon, in his Botanical Dictionary, describes it as rising from 50 to 80 feet the first year, and the second perfecting its timber in hardness and elasticity. It grows in stools, which are cut every two years. The quantity of timber furnished by an acre of bamboos is immense. Its uses are almost without end. In building it forms almost entire houses for the lower orders, and enters both into the construction and furniture of those of the higher class. Bridges, boats, masts, rigging, agricultural and other implements, and machinery; carts, baskets, ropes, nets, sail-cloth, cups, pitchers, troughs, pipes for conveying water, pumps, fences for gardens and fields, &c., are made of it. Macerated in water, it forms paper; the leaves are generally put round the tea sent to Europe; the thick inspissated juice is a favorite medicine.

THE ANNUAL SHOW AND FAIR OF THE NEW YORK STATE AGRICULTURAL SOCIETY FOR 1843.

As we have long been familiar with most of the stock, agricultural implements, &c., &c., of New York, and as we had pressing engagements in another quarter, we did not attend the recent show at Rochester. Our late editorial associate, Mr. R. L. Allen, was present, and has given us in the brief report below, all that was essential at this third great annual Show and Fair of the State Society. It will be seen that there is a greatly increased attention to the subject of agriculture, and that even the highest dignitaries of the land, though formerly shy enough of such things, esteem it a privilege to attend the farmer's festivals now, and give an account of their agricultural operations. We have not space for the speeches delivered on this occasion; and we think in a national agricultural periodical like ours, they would be rather out of place. Nor is there any particular necessity that we should publish them; for by the enterprise of the Rochester Democrat, and New York Tribune, they have already been fully reported and spread over the land, and would in consequence of this be stale news to most of our readers.

The annual Show and Fair of the State Society was held at Rochester on the 20th and 21st September, about a mile north of the city, in an enclosed field of some fifteen acres. At 8 A. M. the throng of citizens and strangers began to pour into the large area, and by 10 o'clock, with the articles and stock entered for exhibition, they had nearly filled every part of the show ground. So far from any falling off in the interests hitherto manifested in the great cause of American agriculture, the vast multitude, congregated from every part of our state, and from abroad, showed rather an increased attention to the subject. There were many deficiencies in the arrangements for the convenience of the spectators, and more in the display of animals, implements, &c.; but as a whole it fully equalled, if it did not surpass, those of preceding years.

The show of Short-Horns was much less than at Albany last year, as was that of implements, vegetables, fruits, and manufactured articles; but many of those shown possessed great merits and excellence, while the exhibition of grade and native cattle, and especially oxen and horses, was decidedly superior, and the beautiful Downs and pure-bred Merinos, in considerable numbers, had no competitors in the last year's exhibition. No Herefords or Ayrshires were on the ground. The show of horses, both in number and excellence, it is believed, has never before been equalled in the United States. Several thorough-breds, from our best stocks, of great substance and merit, and every way fitted to improve our roadsters and farm-horses; two imported Cleveland bays and their colts, possessing decided excellence; a beautiful horse, one of the choicest specimens of the far, and justly-famed Morgan breed; two good representatives of the Canadian horse, and two heavy-framed, big-legged, clod-hoppers; with a great number of choice mares and colts, confirmed the opinion long entertained, that we need no further importations to make our horses equal to anything required by a just taste, and a strict regard to our own interests. None of our best trotters, of which our state can justly boast the possession of many, were exhibited. No asses or mules were on the ground, neither of which are used to any extent in middle or western New York.

Excepting a pair of beautiful China geese, no representatives appeared from the various feathered tenants of the farmer's yard. This was a serious deficiency, when we consider the ornament, variety, and decided utility they are to the country mansion; possessing as they do far more of each than either one of the varieties of garden vegetables, fruits, or flowers, which are made the special objects of premiums by the executive committee. This is an oversight, a minor one though it be, which, it is hoped, may not be again overlooked.

At 7 P. M. of the 20th, four long tables, running the entire length of the car-house, were spread for the accommodation of a thousand guests, where, though viands were scarce, and the only beverage was cold water, much gratification was anticipated from "the feast of reason, and flow of soul." But nothing could be more unfortunate for the realization of the anticipated enjoyment, than the arrangements which had been made. The large concourse had punctually assembled at the door, but were detained in a dense and suffocating crowd outside for half an hour; when their impatience had reached its height, and when *one* small door was opened, the rush for entrance was suffocating and unendurable to the last degree; and an indiscriminating admittance at last became necessary, with or without tickets. The table was spread out, with occasional viands and their accompaniments, like angels' visits, few and far between; and as for water, with the Genesee pouring along its whole tide within a rod of us, it was almost as impossible to procure a glass as if we had been in the desert of Zahara. But this was a small privation in comparison with the disappointment experienced by most of the audience in not being able to hear the speeches. The immense area of the depot dissipated the sound of the speakers, and most of the few speeches made were entirely inaudible to large numbers present. In the midst of the entertainment, however, the scene was varied by the entrance of the cars from the east, and Mr. Webster was announced as among the passengers, and the reiterated shouts of the multitude, both within and without the enclosed saloon, gave evidence of the mighty hold the great statesman has on the admiration of his fellow-citizens.

Good speeches were made by Mr. Wadsworth, President of the society, Ex-President Van Buren, Hon. Francis Granger, Hon. Adam Ferguson, of Canada West, and a brief one by Mr. Webster, after which the meeting closed at about 10.

The show was continued through the following day, and at 3 P. M. the annual address was delivered, where it ever ought to be, on the show-ground, by Dr. Beekman of Kinderhook. It need scarcely be added by those who know him, that it was every way worthy of the occasion. Its leading feature was the history of the early efforts for the formation of the State Agricultural Society, and its progress to the present elevated stand which it occupies. The award of premiums, and a speech, in answer to the reiterated calls of the multitude, from Gov. Seward, closed the fair of the second day on the show-ground.

The plowing-match came off with great eclat, in another quarter of the town. Thirty-nine candidates stood ready to compete for the prize, but owing to the lack of *room*, but twenty-six entered. The quantity of land required to be plowed was one fourth of an acre, within 75 minutes, which in every instance was done within the time, and well done. The competition in the plowing-match was decidedly greater than it has ever been before, and shows the increased interest our farmers are taking in this subject.

In the evening a select supper was got up, at which about 150 members of the society, and gentlemen from abroad were present. After a brief address from Mr. Wadsworth, which he closed by giving as a toast, "The health of the Farmer of Marshfield," Mr. Webster rose, and amid oft-repeated and prolonged applause, he gave one of those deeply reasoned, polished, and philosophical, yet off-hand speeches, that no man but the farmer of Marshfield can so successfully achieve. Nothing, short of the entire speech, will give any idea of its beauty and power, characterized as it was, like all that comes from that giant mind, by the most perfect simplicity, truthfulness, conviction, and eloquence. His first speech occupied nearly an hour and a half, and was followed by Gov. Seward, and Mr. Gowan of Philadelphia, after which, Mr. Webster gave another stinging speech of some 20 minutes, on the disgrace of *repudiation*. He was followed by Col. Alston of South Carolina, who was present with some other gentlemen from that state, and Hon. Adam Ferguson of Canada West. Many other brief speeches were made, all of which were excellent. Many an interchange of wit or wisdom were sent across the tables in all directions, like a spirited, but somewhat irregular play at shuttlecock. The party adjourned at little after 12, and in its development of mind, was a glorious finale to the development of matter in the glorious anniversary of our annual State Show and Fair of 1843.

PREMIUMS.

BULLS.

First Class.—L. F. Allen, Black Rock, 1st prem.;[*] J. S. Wadsworth, Geneseo, 2d; Geo. Hathaway, 3d; D. H. & P. Brooks, 4th.

Second Class.—P. A. Remson, 1st premium; N. Chappell, 2d; E. P. Beck, 3d; Guy Collins, 4th.

Third Class.—C. F. Crosby, 1st premium; A. & J. McArthur, 2d; Thomas H. Newbould, Avon, 3d; E. P. Beck, 4th.

Fourth Class.—J. M. Sherwood, 1st premium; J. Johnstone, 2d; L. F. Allen, 3d and 4th.

COWS.

Class Fifth.—J. M. Sherwood, 1st premium; John Johnstone, 2d; L. F. Allen, 3d; R. H. Hyam, 4th.

Class Sixth.—T. H. Newbould, 1st premium; A. Packard, 2d; J. M. Sherwood, 3d.

Class Seventh.—J. M. Sherwood, 1st premium; L. F. Allen, 2d; T. H. Newbould, 3d.

Class Eighth.—Wm. Cook, Lysander, Onondaga co., 1st premium; P. A. Remson, 2d; L. F. Allen, 3d.

DAIRY COWS.

Geo. A. Mason, Jordan, 1st.

WORKING OXEN.

Class Fifth.—John P. Root, York, Livingston co., 1st premium; Allen Ayrault, Geneseo, 2d; —— Allen, Syracuse, 3d.

Class Sixth.—Allen Ayrault, Geneseo, 1st premium; John Ayrault, 2d; W. W. Wadsworth, 3d.

Class Ninth.—David Brooks, Avon, 1st; —— Freeman, Geneseo, 2d; George C. Latta, Greece, 3d; Allen Ayrault, 4th.

Class Tenth.—Edward A. Le Roy, Caledonia, 1st; T. H. Newbould, 2d; Aaron Packard, 3d; Jno. B. Murray, Mt. Morris, 4th.

Class Eleventh.—Calvin Ward, Richmond, 1st and 2d; W. W. Wadsworth, 3d; David Brooks, 4th.

Classes 12, 13, & 14.—Andrew Snyder, Henrietta; 1st; Wm. Stanbrough, 2d; George A. Mason, Jordan, 3d.

FAT CATTLE.

Jeremiah Brown, Ridgeway, 1st; W. A. Mills, Mt. Morris, 2d and 3d.

STALLIONS.

Henry Paddock, Penfield, 1st; Wm. M. May, Palmyra, 2d; E. Halloway, Lima, 3d; Alex. Baldwin, Romulus, 4th.

Class Second.—Kinsey Stottle, Chili, 1st; E. Watkins, Hopewell, 2d; D. G. Billings, Clarkson, 3d.

MATCHED HORSES.

J. R. Parker, Rochester, 4th.

SHEEP.

Fat Sheep.—George Caward, 1st; T. Noman, 2d; Wm. Swales, 3d.

Long and Middle Wool.—W. Swales, 1st; Thomas Terry, 2d; W. Swales, 3d; John Battridge, 4th.

Pen of 3 *Ewes.*—Allen Ayrault, 1st; L. Cheesbro, 2d; John Beatty, 3d; W. C. Cornell, 4th.

Class Second.—J. M. Sherwood, 1st: Richard Randall, 2d.

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[*] The name of 1st prize bull is Mayduke, bred by the Hon. Adam Ferguson of Canada West, from stock imported direct from England by himself.

Pen of 5 Lambs.—W. C. Cornell, 1st.

Class Second.—J. M. Sherwood, Auburn, 1st; J. Parsons, 2d, 3d, and 4th.

Fine Wool.—Charles Colt, Geneseo, 1st; Roswell Root & Brothers, 2d; Norman Frisbee, 3d; Geo. Cobb, 4th.

Saxon Ewes.—Charles Colt, 1st; R. Root & Brothers, 2d; N. Frisbee, 3d.

Saxon Lambs.—R. Root & Brothers, 1st.

Merino Bucks.—C. Fellows, S. Chili, 1st; L. Cheesbro, 2d.

SWINE.

Boars.—H. C. Hills, Oneida co., 1st; D. Budd, Vienna, 2d; S. Tibbets, 3d; H. Raymond, 4th.

Sows.—L. F. Allen, Buffalo, 1st; Wm. Wheeler, Rochester, 2d; Jno. Langham, 3d; P. A. Smith, 4th.

DOMESTIC MANUFACTURES.

Woollen Blankets.—1st premium, David S. Lee, Darien, $5 00

Domestic Flannel.—George W. Webb, Pamela, Jefferson co., 5 00

Extra premium—$2 50 to Hart & Massey, Jefferson co., and O. Allen, Wheatland.

Woollen Cloth.—1st premium, Clark Corbin, Ovid, Seneca co., 5 00

Woollen Carpet.—Jona J. Gillam, East Bloomingfield, 5 00

Double Carpet Coverlet.—James A. Worth, Alexander, 5 00

Linen.—Mrs. A. Halleck, Westmoreland, 5 00

Linen Diaper.—Ezra Bishop, Attica, 5 00

Hearth Rug. —— ——, 3 00

Extra premium—$1 50 to J. M. Rockwood, Pittsford, and Mrs. James L. Clark, Clarkson.

Kersey.—S. M. Hanford, Perinton, 3 00

Rag Carpet.—Orlando A. Hall, Parma, 3 00

Tow Cloth.—David J. Lee, Darien, 3 00

Wove Stockings.—Ezra Bishop, Attica, 1 00

Knit Stockings. —— ——, 1 00

Sewing Thread.—Ezra Bishop, Attica, 2 00

FLOWERS.

Greatest Variety and Quantity.—Ellwanger & Barry, Rochester, $5 00

Second Best.—Miss Wadsworth, Geneseo, 3 00

Third Best.—Miss Mary P. Utley, Volume of Trans.

Best Floral Ornament.—Wm. King, Rochester, 5 00

Volume of Transactions to Henry Billings, for a large bouquet of asters, &c.

BUTTER.

H. Morrison, Orange co.,	$8 00
A. B. Porter, Canandaigua,	5 00
D. Wood, West Bloomfield,	5 00
Isaac Seeley,	5 00
Wm. Sternburgh, Henrietta,	5 00

B. Piffard, Livonia co., 2 Volumes of Transactions and $2.

CHEESE.

T. Berks, Herkimer co.,	$7 00
B. Hathaway,	7 00
H. Arnold & Son,	6 00
J. Ide, Jefferson co.,	5 00
N. Bronson, Warsaw,	5 00

John Lapham, Farmington, 2 Volumes of Transactions and $2.

FRUITS.

Greatest Variety of Table Apples.—D. Thomas, Cayuga co., $5 00

Second Greatest.—B. Hodge, Buffalo, 3 00

Third Greatest.—O. Phelps, Canandaigua, Volume of Transactions.

Best 12 Sorts.—Abner Bryant, Buffalo, $3 00

Seedling Apples—Jonathan Buel, W. Bloomfield, 5 00

Table Pears.—D. Thomas, Cayuga co., 3 00

Winter Pears.—D. Thomas, Cayuga co., Volume of Transactions.

Quinces.—Nathaniel Draper, Brighton, Transactions.

Peaches.—N. G. Hotchkiss, Vienna, do.

Plums.—Isaac Hills, Rochester, do.

Native Grapes.—J. W. Smith, Rochester, do.

Foreign Grapes.—Elihu Tyler, Buffalo, do.

PLOWING MATCH.

1. Wm. Cornell, Henrietta; Thomas Farl, plowman; Cayuga plow.

2. John Chapman, Ogden; Michael Murray, plowman; Laughling plow.

3. Hosea Moffat, Brownsville, Jefferson co.; Geo. W. Phelps, plowman; Quaker plow.

4. S. Burtiss, Phelps, Ontario co.; John Dore, plowman; Burrill plow.

5. P. W. Dickey, Phelps; D. C. Dick, plowman; Coddings' plow.

6. William Hamilton, York; himself plowman; Steward plow.

7. H. Wyard, Avon; Peter O'Hare, plowman; Liv. co. plow.

8. Donald McNaughton, Wheatland; M. Loder, plowman; Lord's plow.

9. D. W. McPherson, Wheatland; R. Dinwiddie, plowman; Montgomery co. plow.

10. F. B. Shaver, Livingston co.; James Blackwell, plowman.

11. Stephen Otis, ——; himself plowman; Monroe co. plow.

12. Hiram Smith, ——; himself plowman; Cayuga co. plow.

13. W. A. Hogmire, Avon; Steward plow.

14. R. C. Styles, East Bloomfield; S. Earls, plowman; Ontario co. plow.

15. E. J. Brown, Oxford, Chenango co.; himself plowman; Avery plow.

16. Geo. Shaffer, Scottsville; John Sall, plowman; Livingston co. plow; took first premium last fall.

17. E. W. Jones, Bristol; himself plowman; Coddings' plow.

18. Wm. Brodie, Riga; W. Brodie, Jr., plowman; Stewart's plow.

19. John Betridge, Riga; W. Betridge, plowman; Genesee plow.

20. William Hamilton, Alexander; himself plowman; Scotch plow.

21. D. McNaughton, Caledonia; himself plowman; Peck plow.

22. Isaac Selye, Henrietta; himself plowman; Oneida plow.

23. John Campbell, Caledonia; Robert Paterson, plowman; Caledonia plow.

24. D. W. McPherson, Caledonia; Connecticut plow.

25. Tobias Wetmer, Amherst, Erie co.; himself plowman; Washington plow.

26. J. Howell, Chili; William Pace, plowman; Caledonia plow.

The following we understand to be the names of the successful competitors at the plowing match.

1st premium—J. Howell's team, Chili, Mr. Pare, plowman, $15 00

2d premium—W. Utley, Phelps, 10 00

3d premium—W. Craig, York, 5 00

4th premium—Geo. Shaffer's team, Wheatland, John Sall, plowman, Volume of Transactions.

NEW YORK FARMERS' CLUB.

On account of the fruit season, it was resolved in the monthly meeting of the Farmers' Club for August, to hold semi-monthly meetings for the succeeding two months. The semi-monthly meeting accordingly took place at the Pacific Hotel, on the 29th of August, and the regular monthly on the second Tuesday of September. There was a fine display of vegetables, fruits, and flowers each time, and crowded assemblies present, among which we noticed at the last, from abroad, Don Antonio Freyre, secretary of the Economical Patriotic Society of Havana, also Mr. Lewis of Kentucky, Commodore Dekay of the United States navy, &c. General Johnson of Brooklyn was in the chair at both meetings.

Mr. Parsons of Flushing, presented a leaf of the Pawlownia Imperialis, a rare tree, recently imported by him. It is a native of Japan, and has now become well acclimated in France. It receives its name, we believe, from the present Queen of Holland, in consequence of being first introduced into Europe by a Hollander. It has a rapid growth, with a large expanse of leaf, surrounded by three branches of a fragrant blue flower.

Mr. Townsend of Astoria, a very superior kind of garden corn; also a variety of the same, every grain of which had a husk; also superior white Virginia wheat, producing, this year, at the rate of 40 bushels to the acre.

Mr. Clowes of Harsimus, extra-sized beets and carrots.

Mr. Brill of the same place, beets two and a half feet in length, produced from an amalgamation of the blood beet and scarcity; also a bouquet of great beauty, gathered from seedling verbinas.

Mr. Sidell, green gage plums grown at Kingston, measuring six inches in circumference; also luxuriant stalks of the Egyptian corn grown at Westchester, something like the millet. Mr. Wakeman remarked that Mr. Van Winkle of Bergen had grown it at the rate of 77 bushels per acre, weighing 62 lbs. to the bushel, and intended this year to grind and flour some of the grain, for the purpose of seeing what kind of bread it will make. Commodore Dekay remarked that he had seen none but this kind of corn growing in Palestine.

Mr. Bolle, very fine seedling roses grown at his garden on the Bloomingdale road near 50th street, from seeds planted a year ago last November.

Mr. Halsey of Astoria, nectarines seven and a half inches in circumference.

Mr. Covert of Bushwick, a cucumber 20 inches in length.

Dr. Cardenus of Bergen, the klosh apple, an excellent fruit for the table; also pound pears. He will furnish cuttings to any one desiring them.

Mr. Stebbins of Northampton, Massachusetts, through Mr. Wakeman, specimens of bark-silk, made from the bark of the mulberry tree. A committee consisting of Messrs. Wakeman, Stevens, and Meigs, was appointed to examine and report on this subject.

Mr. Ward, Isabella grapes.

Mr. Stevens of Astoria, figs; also grapes.

Mr. Steel of Jersey city, the largest bunches of the same we have ever seen.

Mr. Tibbets of Yonkers, a very large double tomato, weighing two pounds ten ounces, and fifteen inches in circumference.

Mr. Stryker, cultivated cranberries of superior size to those which grow wild. The vines were transplanted by him in April last. Also the large pine-apple pears.

General Johnson remarked, that the Wapato found on the Columbia river is not a potato, but a bulbous root, growing in the mud at the bottom of ponds, and therefore can not be introduced here.

A discussion arose at some length between Messrs. Johnson, Knapp, Stevens, and Wakeman, relative to the best breeds of cattle. They seemed inclined upon the whole rather in favor of the natives. General Johnson remarked, that the best cross he had known for the farm and butcher, was that of the Durham on the Holland cattle. Mr. Stevens thought the English cattle superior, as they had greatly increased their size, and improved their quality in the past century.

Mr. Carter presented a written report on the treatment of cows, detailing his experience at length.

General Johnson gave it as his opinion that the seed-stones of peaches were impregnated with the destructive insect that spreads such havoc among our orchards. Several gentlemen remarked that they had planted peach-stones from Buenos Ayres and the countries on the Mediterranean, without success. Since the meeting of the club we have seen a large number of flourishing young trees growing in Mr. Bergen's nursery at Brooklyn, produced from the Mexican peach-stones. The Mexican peach-tree is free from the yellows.

Messrs. Haven and Stevens thought alkalies were the best manure for grapes, and recommended grafting the native wild ones on the Isabella, because it is so early ripe.

Mr. Lewis of Kentucky stated that zea maize, (Indian corn,) originally had a husk on each grain; that the northern Indians had corn with the husk on each grain, but that it has disappeared by cultivation. A variety of other subjects were touched upon, after which the club adjourned.

The next regular monthly meeting will take place on the second Tuesday of October. We trust that the club will soon take the resolution of announcing the subjects of discussion one month in advance, so that the members can have an opportunity of preparing themselves for them.

ELECTRICITY, AND ITS EFFECT ON GROWING PLANTS.—It is supposed, with much probability, that electricity in the atmosphere has much to do in promoting the rapid growth of vegetation. It is well known that a current of electricity passing through an egg, will perfect the chicken in six or eight days, while the natural development by incubation is twenty-one days. The effect, too, has been shown in the rapid maturity of plants which have been subject to a constant flow of the electric fluid. During the season of vegetation, plants may be benefited by electricity, not only as conductors to and from the atmosphere, but possibly also by the formation of nitric acid, caused by the electric spark passing through the air, which, diluted by the rain, and afforded to the roots of the plant, is a powerful aid to vegetative development.

Receipt for Curing Hams.—We have been handed the following receipt for curing hams by one of the most eminent practitioners in this city; the saleratus is at least new to us, and we therefore publish it although it may not be a new ingredient in the receipt to others. In Cincinnati, where large quantities of hams are annually cured, pepper, allspice, cloves, nutmeg, cinnamon, and other little ingredients are usually added; but to the receipt.

Cover the bottom of the cask with coarse salt, lay on the hams with the smooth or skin side down, sprinkle over fine salt, then another layer of hams, and so continue until the cask is full. This ought to be of the larger kind. A cask holding 64 gallons is small enough, and it would be better if it held 120 gallons. Make a brine in the following proportions: 6 gallons water, 9 lbs. salt, 4 lbs. brown sugar, 3 oz. saltpetre, 1 oz. saleratus. Scald and scum, and when cold pour the brine into the cask until the hams are completely covered. The hams should remain in this pickle at least three months, and a little longer time would do them no harm.

Bene-Seed Oil.—The Ouachita Courier says that the bene plant is cultivated with success by Mr. M'Intyre, for the purpose of obtaining oil from its seed. Twenty bushels of seed is considered a fair average per acre, which will give 50 gallons of pure oil, worth $1.25 per gallon, making a product of $62.50 per acre. The oil is pleasant to the taste, and superior to the olive-oil usually obtained. It is pretty generally known, that nothing is more soothing in cases of cholera infantum or bowel complaints, especially in children, than the mucilage made by dipping the green leaf in water—the seed is also an agreeable article as seasoning for food.

Kiln-Dried Corn Meal is exported in considerable quantities from the west, down the Ohio and Mississippi rivers, to the West Indies. The meal is said to keep sweet and sound for a whole year in any climate. New York is something of an exporter also of this article to various parts of the world. We have not a doubt that the more this article becomes known abroad, the higher it will stand in public favor. Immense quantities might be sold in Great Britain and Ireland, could the inhabitants once get a taste of it.

Artifical Oysters.—The following recipe was given us recently by a lady in Dutchess county, for making, what to our taste, is a delicious dish.

Take young green corn, grate it in a dish; to one pint of this add one egg well beaten, a small tea-cup of flour, half a cup of butter, some salt and pepper, and mix them well together. A table-spoonful of the batter will make the size of an oyster. Fry them a light brown, and when done butter them. Cream, if it can be procured, is better than butter.

Anniversary of the Massachusetts Horticultural Society.—After a splendid exhibition at Boston, this society held its fifteenth anniversary at the Pavilion. A deputation from the American Institute of this city was present, and though strongly pressed, we regretted that we could not have been one of the number. It was a joyous, and we doubt not a profitable meeting. Some of the toasts at the dinner strike us as being of a *new species*.

"The Game of Gardening—Something to *cut* and a good deal of *shovelling*.

"But no TRICKS in the trade
Except what we take with the SPADE.

"His Majesty King Pippin—Unlike other kings, he can get *mellow* without losing his dignity.

"*Tu*-lips from Eve's Garden—May we set our faces against them."

To Agricultural Societies.—We tender our grateful acknowledgments to the officers of various agricultural societies, for their polite invitations to be present at their respective shows and fairs. We assure them that nothing would give us more pleasure than to assist at one and all. We had made engagements some two months since to attend such as it would be in our power this season, others will be visited another year. We were particularly desirous of being present at Northampton, Philadelphia, Wilmington, and Baltimore; but previous engagements, and editorial duties will not admit of it the present season.

South-Down Sheep For Sale.—We would call particular attention to the advertisement of Mr. Rotch in this number. His sheep have been imported from some of the choicest flocks of England, and at a great expense, and those wishing to purchase will not soon meet with so good an opportunity.

Galloway Cattle.—To any one desirous of obtaining a beautiful Scotch black Galloway cow and bull, see advertisement.

The Albany Cultivator.—Those who feel interested, will find a full answer, under Editor's Table, to the personalities which appeared in the September number of that paper. It is the first time, and we intend it shall be the last, that we condescend to notice such things.

Extra Numbers.—We shall issue a number of our paper on the 15th and 1st of each month hereafter, till Volume II. is completed, which will be on the 15th of December next. We trust that our friends will bear this in mind, and favor us with an extra quantity of communications. Volume III. will promptly commence on the 1st of January, 1844.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

THE BEST SHEEP COUNTRY.

Iberville, La., August 12th, 1843.

YOUR correspondent, Americus, in his second paper on sheep-husbandry, page 12 asks, "Where is the best sheep country? Is there no region within the United States, where, while it is cool enough in summer to be a grass-growing country, the winters are so short and mild, that sheep will not require much, if any feeding. I ask for information. Will not some of your readers at the south and southwest inform us?"

Accepting the question as a general one, I answer, that Louisiana and the southern part of Mississippi will nearly fit the measure of the country required by Americus. Cool enough in summer to grow grass, and so mild in winter as scarcely to deserve the name. Here, sheep require little or no feeding, and yet they thrive well, and have the reputation of producing superior mutton. Perhaps a short description of the climate and country will not be amiss; and then Americus can judge for himself, whether I can claim to have found the "best sheep country."

The west bank of the Mississippi is level land. The east bank, from the gulf of Mexico to the bayou Manchac, or Iberville river, as it is called on some maps, is very level. From this place north, it is composed of clay-hills. So much for the country. The climate is generally equable. The severe weather of winter is seldom less than a week, or more than three weeks duration. In summer we sometimes have severe droughts. I have known them last six weeks, and this is the worst weather we have all the year round. Then, on the hills, the pastures are burned up, and in the lowlands much injured, though not entirely destroyed; for nature, at that time, is prolific in dispensing her plenteous and refreshing dews. These are our extremes. This year we have had a wet season. The grass in the lots about my house has been green for twelve months past, never once having been *poor* feeding. I would not like to tell how many cows, calves, sheep, and occasionally hogs, have been pastured on them. The verdure, to be appreciated should be seen. So much for the pastures. Of the capability of the land to supply food, Americus can judge when I tell him, that full crops of corn can be made (barring bad seasons), if planted any time from February to July. I have sowed oats in February, and cut them the last of March; planted corn in May, and gathered 48 bushels per acre from the same ground, and all without manure. The land is inexhaustible, having *no bottom.* It would make northern farmers laugh at the idea of resting land with corn. But cane and cotton-land is always so renovated. Good planters sow peas with their corn. But to return. Some persons follow with peas, after oats; and such masses of verdure you never saw, and better hay made from pea-vines never was eaten. Of the quantity per acre I can not say. There is also a natural grass, which succeeds the white clover, called crab-grass. It grows in every and any place, and much hay is gathered from the corn-fields after fodder is pulled, by provident planters. The turning rows and hauling-roads on sugar plantations are covered in the fall with it, and much hay made. Corn can be sowed broad-cast four or five times on the same land. Irish potatoes turn out 400 bushels to the acre; sweet potatoes and ruta baga half as much more. Oat, rye, and wheat straw, we save for fodder. In short, everything that can be converted into food for cattle and sheep in the northern states, can be made to serve the same purpose here. No attention is paid to artificial treatment. We are in that respect in "*pures naturalibus*" (a natural state.) Three fourths of the year on the coast,* sheep run on the roads and levees in front of the plantations; after they are turned into the fields, the crops are gathered. So much for the country as it is, and what it might be. A word now about the sheep.

Sheep have only been considered valuable on account of their carcase; and the flavor of Louisiana and Mississippi mutton has been celebrated for a long time in this part of the world. Of the breeds I can say nothing, though I fancy it would puzzle the most skilled to refer many of them to any "class and order." I have been informed, however, that one capable of judging, has pronounced the common stock about Natchez to be the best "common stock" in the United States since 1835. The South-Downs (where won't *they* thrive?) have been introduced here, and are rapidly spreading, though I am sorry to see they are being crossed with inferior natives. Of their productiveness I can only say that it is most marvellous. "Few die, and we have no fear from wolves," vide American Agriculturist, page 115, and they receive no protection from sheds, although they ought, to our shame be it said. Food, except the pastures, they receive none; and no other care or attention, except to salt them twice a week. All the other aid they receive, is obtained from Dame Nature. No art used and none expended; and yet they are just fat enough to be delicious. I have often seen mutton on the table so fat that I could not eat it. Of the quality of the wool I can say nothing; perhaps it would take one hundred hairs of an Austrian sheep to equal one of a Creole (vide Am. Ag., p. 93.) I have heard it said, and I believe it is by most persons considered as "*res adjudicata,*" (a thing settled,) that fine-woolled sheep degenerate in warm climates. Query? as to the Merinos I fancy that the isothermal degree of latitude of the south of Spain, would not be very, very far, from the latitude of New Orleans. I am inclined to suspect that this, like many other "generally received opinions," will fail when tested by the talisman of experiment. I have been informed by a lady, a native of this country, that some thirty years or more since, it was thought that cabbages would not grow in this climate! Now we have spring cabbages, summer cabbages, and winter cabbages—the winter much the best.

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* NOTE.—The word "coast," used at the south, means the banks of the Mississippi from its mouth to the distance of about 200 miles above New Orleans. It is a perfect paradise to look at, particularly in the months of April and May. See our description, Vol. I., p. 100, American Agriculturist.—ED.

I must conclude, by saying, if I have been late in replying to Americus my apology must be that I have been but one month a subscriber to your paper, and received the back numbers only a few days since. If I can afford any other information, I shall do it with much pleasure.

J. C. B.

For the American Agriculturist.

THE AGRICULTURE OF CUBA.—No. III

Ingenio Atalaya, May 18*th*, 1843.

DEAR SIR: Agreeably to promise in my last letter, I now proceed to describe the mode in which they manufacture sugar in this section of the island.

As soon as the cane is fully matured, cut, and carted to the mill in quantities sufficient to commence the operation of grinding and boiling, a busy and cheerful scene ensues. The mills are set in motion by oxen urged on by the negro song; the canes are passed through the rollers; the rich, white juice begins to flow, which is conveyed into receivers; negroes are employed in making lime-water, washing and cleaning the boilers, adjusting the *ormas* or moulds, and preparing fuel for lighting up the fires. The apparatus for grinding usually consists of three upright rollers of iron or wood, turned by oxen, but rarely there may be found the horizontal rollers of Collinge improved by Bell and others. The canes are twice subjected to the action of these rollers, by which means they are nearly deprived of their juice; and the trash is carried away, spread upon the ground to dry, and afterward used for fuel. The expressed juice flows from the mill in gutters into copper receivers or clarifiers which are generally two in number, and are placed over the flues. The caldrons or boilers are four in number, and are proportioned in size according to the power of the mill and the extent of the plantation. The boiler into which the clarified juice is first conveyed from the receiver, is usually equal in capacity to the receiver itself, and on this estate contains 720 gallons. The second boiler is of about two thirds the magnitude of the first; the third three fifths of the second; and the fourth or last boiler employed, is of about one half of the capacity of the third. The boilers are set near to each other in a direct line, the first two having separate flues, which are provided with dampers for regulating the draft and diminishing at pleasure the action of the fire.

A trusty man is employed to watch over and direct the whole operation of the mill. A part of his duty consists in seeing that all parts of the establishment and every vessel or implement is kept clean and in order. Without this cleanliness, an attempt to manufacture good sugar would prove futile. The rollers, mill-beds, and gutters for conducting the juice, must be well sprinkled with lime whenever the work stops; and every morning and evening all the utensils must be washed with hot ley or lime-water, and afterward rinsed with clean, cold water.

As soon as the mill is put in motion, and a clarifier is filled with expressed juice, the fire is lighted up, and the process of *tempering* commenced. This consists in adding an alkali to the juice in such quantities as the practical knowledge or discretion of the operator may dictate. In general, about one quart of clear lime-water is used, in 600 or 700 gallons of juice from old cane, and about double that quantity to that of new cane. On some plantations, however, in the vicinity of Bayatabo, the natural properties of the cane are such that no tempering is necessary beyond that produced in cleansing the boilers and utensils with lime-water. The sugar from the estate of Don Juan Callejas, in particular, exceeds in beauty that of St. Croix. Samples of this sugar may be seen at his agents, Messrs. Holt and Owen, 209 Front street, New York, where further information can be given relative to its manufacture.

As the juice in the clarifiers becomes heated nearly to the boiling point, the feculent matter separates and rises to the surface in the form of a scum. It is then conducted into the largest boiler, where it is suffered to boil. The scum, as it rises, is carefully removed with a scummer, and as soon as the juice in this boiler is reduced by scumming and boiling, that it can be contained in the second boiler, it is laded therein. The same process is then continued in the second boiler as in the first, and if the color of the liquor does not then appear so clear as may be desired, more lime-water is added. If the froth rises in large bubbles, and the liquor is clear, it is considered to be in good condition. When the liquor is sufficiently reduced to be contained in the third boiler, it is transferred therein, and so on to the fourth, where the fire is more intense. The last two boilers are kept full by constantly lading the sirup from one into the other, and at the same time continuing the scumming. When the ebullition of the sirup becomes too violent, it is prevented from running over by heating it and breaking the bubbles with a large skimmer or wooden spatula. As soon as the "proof point" arrives, the fire is abated, and the sirup as rapidly laded into a cooler, and the boilers immediately refilled. This point is determined by observing when grains of sugar begin to form on the back of the ladle when cooled; or, when a thread of the sirup produced by the thumb and forefinger will break before it can be drawn beyond a length of half an inch.

Contiguous to the boilers are placed the coolers, which generally consist of large log troughs, or vessels formed of planks about ten feet long, five feet wide, and one foot deep. Two successive charges of sirup are conveyed from the last boiler into each cooler, and there left to remain until crystallization takes place, which usually requires but a few hours. The sirup or sugar is then transferred into the *ormas* or conical earthen moulds, or more recently into barrels or hogsheads, which are placed over the molasses cistern and left to drip. In the course of 24 to 36 hours the plugs are withdrawn from the ormas or hogsheads, and they are allowed to remain undisturbed for 20 or 30 days. The sugar is then removed from the moulds and emptied on wooden platforms, and exposed to the rays of the sun until its color and texture please the operator. It is then assorted and packed up in casks for shipment.

The article manufactured by the foregoing process is known in Europe and the United States as *muscovado* or brown sugar, and is the material from which white or loaf sugar is often made.

There is another class of sugar manufactured here, known by the name of *clayed sugar*, which, however, is more generally made in the neighborhood of Havana, Matanzas, and the older settled parts of the island, where also more attention is paid to modern improvements, the introduction of the steam engine, and other facilities in the manufacture of sugar.

D. J. Browne.

For the American Agriculturist.

THE STRAWBERRY.—Concluded.

Astoria, July 17, 1843.

I do not wish to be understood as saying that strawberries (the large ones especially) are not frequently to be found without their stamens, and therefore called female, and perhaps sometimes without their pistils, and thence called male, and again with calices and petals, without either stamens or pistils; but they are *lusus naturæ*, or abortions, caused, as the writer believes, from over cultivation. They can never, as now cultivated, produce an abundant crop, for they have not the necessary parts on the same plant, which are, as a general rule, essential to produce fruit. Though any strawberry can be impregnated with pollen from another or distant plant, I admit this principle, if not universal, is very general, the progeny is mongrel if the plants differ; and even plants not of the same class and order will, to some extent, breed; for instance, the rhododendron and azalia produce what has been called the rhododendron azaloides, while the first is *decandria monogynia*, and the last *pentandria monogynia*; this production is not *mongrel*, but *mule*. Mr. L. asserts as stated, that the Hudson *strawberry* will not impregnate certain other varieties. To have tried his experiment effectually, it should have been repeated many different times and seasons. He should have been certain that two different plants had, when the trial was made, arrived at precisely the same maturity. The gardeners who produce varieties bring two plants together, and continue them so growing. They early remove the anthers of the plant to be impregnated, for fear they may perform the duty; they then watch the bursting of the anthers on the male plant, and sometimes, with a sharp tooth-pick, remove the exuding pollen to, and deposite it in the ready stigma. All this must be many times repeated, always in the "nick of time," before we can say the strawberry belongs to the diœcian class, having males on one plant, and females on another, or that such a state is the proper one to grow it in.

Now the rhododendron and azalia have filled our woods, "cheek by jowl," from the creation of the world, and yet not until we sent these plants to England, and they were placed under charge of an English gardener, could they be instigated to such an unnatural act of concupiscence. But after all, it is not quite so bad as to make the poor female strawberry break up all its little family arrangements, and separate from its natural protectors, creating a neighborhood of nine female domicils to be visited by one stranger. There is a variety of sweet William, too, supposed to be produced by an intimacy with a carnation.

After what is stated of the rhododendron and azalia, the sweet William and carnation, and many other plants might be added, it will be considered, the writer fully admits, that the strawberry pollen may be wafted by winds, carried by insects, or removed by man, so as to impregnate all the varieties of the strawberry, but at the same time, he is of opinion that the strawberry is not, and can not be, so impregnated to produce a crop.

The strawberry has a large number, probably fifty or more, pistils, with their styles or tubes; every seed requires for its formation a stigma, and it requires the pollen to impregnate it. Now nature makes twenty stamens, and bursts their pollen immediately over the stigma or female parts of each plant. They may be said to be created in *coverture*. Yet if, with all this nice arrangement, the large kinds, as grown, do not regularly fecundate, (for it is thought they have generally the male and female parts to some extent,) can it be possible that the strawberry would be made productive by getting into a breed of them, on which the sexual parts were in different plants? As a general rule, the arrangement of Providence preserves all the different species of animals and plants distinct; now among plants this principle could not be carried out, if one plant could readily fecundate other plants. And it is not necessary, since the propagation is made to go on by the sexual parts being, in almost all cases, on the same plants.

The writer believes, though he has no written authority for it, that, at least as a general rule, the seed of the natural plants give like seed or fruit. That is, that the acorn of America gives its own species only; that other nuts and forest trees follow the same rule. He knows of the varieties of locust and acacia growing and flowering together, and seeds coming up, but no new varieties.

In the vegetable garden, you find that without care or attention, the varieties of cabbage, radish, turnep, onion, bean, spinach, lettuce, &c., are seeded and grow with different varieties, closer together than the *one male in ten*, would place the strawberry, and yet all preserving their distinct character. The gourd family, squash, melon, &c., are very apt to mix; they present a large funnel-shaped blossom, which accounts for it; though they do not often double, yet, in a late instance, all the flowers on a melon-vine were exhibited in England in a double state. The Indian corn, too, mixes readily. Providence has given a superabundance of pollen from the tops of the corn, so as almost to cover the ground. Here is the hand of a good *gardener;* each of the two hundred kernels of an ear of corn must have the pollen (or male part) to form the kernel, for the kernel or seed, of corn is the valuable part.

We eat the seed of none of the garden productions, nor of the fruits, but their tubers and pulp. To preserve all the seed without loss is not as material in most plants as in the corn; yet if the cob (which is the receptacle for pollen) was to be left on nine hills, and the tops or male parts of the corn cut off before flowering, and the top left on the *tenth* hill only, the writer believes there would be on the nine hills cobs mainly, without corn.

I must admit one fact which has a bearing on the position that the pollen, on different natural plants, does not *readily* fecundate other plants; I refer to the grafted trees, the seeds of which are understood to give different varieties. I have no facts to the contrary, but may it not be, that the sap of the natural stock of the grafted fruit does enter into the kernels or seed? It does not affect the pulp, which is certainly remarkable, but does it follow that the stock does not affect the kernel?

It is supposed that the pollen of other trees causes the consequence referred to, yet I have not known the fact well established, that the kernels of grafted trees (though entirely separate from others) gave the same fruit! The locality where I write has only good grafted apples, pears, and peaches, growing for miles around it. Ought not, therefore, the seed of these grafted trees to give at least, as good fruit as the trees around them, if they are impregnated by the adjacent trees, as supposed? The fact is they give wretched fruit—hog peaches, and poor apples. The cherry appears to give the original fruit of the country, now almost extinct, a small black cherry.

But to return to the strawberry. The writer set out a large bed several years since, of the black roseberry, strawberry seedlings, (purple would be a better name,) every plant came up, and bore alike. Now (I do not know the circumstances of the locality whence the seed came, being European) the same circumstances or results would not arise from our peach, apple, or pear; nor would such have been the result if strawberries were easily fecundated by other neighboring plants. I find too, that the Alpine strawberry is frequently propagated for its fruit by seed instead of runners. This would not be if the seedlings did not grow the Alpine strawberry.

The habitude of the camelia has some bearing on our subject. It has been made to turn the stamens, and pistils, and all the sexual parts into flowers; yet occasionally the double camelia is true to nature, and will bear its fruit or seed. So too of the *pirus japonica*, a flowering shrub, only cultivated as such; yet the writer has a plant with a dozen or two of fruit on it—a great crop for the large strawberry, if on the same ground.

The writer has a tomato bed, the plants of which are all now (July) seven feet high, with little fruit, but of large size, not ripe. They are growing on the plot where the removed raspberries grew. He believes the excess of cultivation has been playing the mischief with their stamens and pistils. *Remedy*—plant next year on a drier and less luxuriant spot. *Proof.*—A part of the seven feet high seedlings were planted in a dry soil, and now have a good crop on them.

For Mr. Hovey's consolation, I beg to mention that a friend of the writer's, on a virgin and thin soil, coarse gravel, not over four or five inches, raised, he informs me, the present season, on a patch of 20 feet by 30, five bushels of Hovey strawberries, and was much pleased with their yield; no other strawberry near them.

Mahon, a gardener of high authority, directs, in making a strawberry-bed, that the first runners, or those nearest the old plant, be selected as most likely to give fruit. There is much to support this opinion, and perhaps the planting the end runners may have made the plants in many cases sterile.

This theory of Mr. Longworth, here combatted, is not new, for one English gardener, (Mr. Keen,) as early as 1809, supposed the Hautboy strawberry was *diœcian*—male and female. But Professor Lindley, who is very high authority, says, "In cultivating the Hautboy strawberry-plants, from bad collections, produce male or sterile plants, as *gardeners* call them, and many are of opinion that these males are necessary in their beds to fertilize the others, the consequence is that these beds prove more fertile in leaves than in fruit—that their sterility comes from the *males*, as they always produced a superabundance of runners."

Mr. Editor, I must apologise for this long article, for I claim neither extensive experience nor botanical science, but I have thought the principles put forth in the horticultural periodicals injurious, and have given my views in a very desultory manner, not so much for any value in themselves, as from the hope that they will elicit more able pens, and more experience in a very interesting department of our markets and gardens.

S. S.

For the American Agriculturist.

SOILS AND THEIR MANAGEMENT.

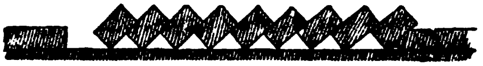
Buffalo, September 4th, 1843.

Soils are distinguished by a variety of names, indicative of their character and peculiarities. Thus we have clay or argillaceous soils; sandy soils, calcareous soils, containing an abundance of lime; and peaty soils, in which decayed vegetable matter exists in a peculiar state to the exclusion of almost every other substance. These form the extremes of soils, and wherever they are found unmixed to any extent with other ingredients, they are universally barren. Happily for the human race, they exist in this condition, only to a very limited extent in comparison with the whole surface of the earth.

It is one of the first objects of the agriculturist, so to modify and temper the soil he tills, that it will be suited to the production of the various articles he wishes to cultivate. There is very little land, comparatively, in the United States, that requires to be improved by the addition of large quantities of other soils; yet when it occurs in farms subject to cultivation, a careful consideration of our interest will induce a modification with such substances as are best fitted to produce this object. Very strong clay should be dressed with a quantity of sand; and sandy soils should be made more adhesive by the addition of clay; while peat soils should be thoroughly drained, and the surface covered thickly with sand or gravel. Astonishing effects have been produced by simply mixing two or more perfectly barren earths together.

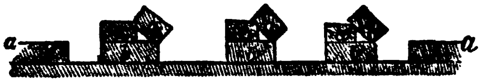
Clay land should also be underdrained when it can be done advantageously. When this is impracticable, the land should so be thrown up with the plow, as to allow all the surface water to run off quickly, as this species of soil is peculiarly tenacious of moisture, and one of the greatest difficulties in its cultivation is the keeping it sufficiently dry. The best system of plowing is to lap one furrow on to the other, thus,

(FIG. 49.)



Always plow in the fall for a spring crop when practicable. The advantages of this are many and great. The principal obstacle to vegetation in a strong clay, is the great adhesiveness of the earth, by which the rootlets of the plants can not penetrate so as to extract nourishment for the support of vegetation. By plowing in the fall in the above form, the frost and air crumbles it into a light mass of earth, and without any further plowing the grain may be sown upon it and harrowed in, or it may be plowed thus,

(FIG. 50.)



a, *a*, surface of the soil unplowed.

b, *b*, *b*, portions of the soil untouched by the plow.

c, *c*, *c*, furrows turned on the surface of the land.

d, *d*, *d*, furrows turned on top of the first furrows.

By the last system of plowing, we have equal advantages from the action of frost and air, with the additional one of having the general surface thrown somewhat higher above the wet than in the first example, and for roots or gardens, or any object requiring replowing in the spring, perhaps it is preferable; the plow and barrow then giving to it such surface as may be required.

Sandy land must receive a treatment just the reverse. It should be rendered as compact as possible, and for this purpose after plowing, seeding, and harrowing, *it should be rolled* as often and thoroughly as time will permit. All the interstices between the particles of sand should be closed up as much as possible, so as to give a foothold for the roots, prevent the two rapid escape of moisture, and the evaporation of the gases from the manures. Those manures should be added that have a tendency to produce compactness and moisture, while clays should have such applied to them, as tend to separate the soil and give it dryness. Excessively coarse and unfermented manures are adapted to the latter; while for the former, the short manures, lime, gypsum, and ashes, are the most appropriate.

The productions of these two soils should be somewhat different, to afford to the farmer the greatest amount of profit. Rye, Indian corn, beans, clover, vines, &c., are the best adapted to sandy soils; while barley, wheat, oats, grass, &c., are best suited to the heaviest clay.

By much the largest proportion of land is removed far from the *extremes*, and with proper management may be made to grow successfully, nearly all the varieties of products claiming the farmer's attention. Such admits of more varied cultivation, and are congenial to almost every variety of manures. Perfect success in the cultivation of any soil, can only be achieved by the closest attention on the part of the farmer, who must watch carefully what is, and what is not, adapted to the peculiarity of his soil, manures, and climate.

R. L. ALLEN.

For the American Agriculturist.

FRYE'S LACTOMETER.

THIS cheap, simple, and readily-applied instrument can not fail to be of great utility to all persons who purchase or are concerned any way in the use of milk. It will enable the farmer to determine the quality of his dairy, and to select such breeds of cows, and give them such food as will yield a rich supply of milk. To heads of families and venders of milk in cities, it will prove equally advantageous in detecting frauds practised by milkmen in feeding their cows on *slops*, and in adulterating their milk with water or otherwise. And above all, to mothers and nurses it will be invaluable in affording them the means of testing the purity of the milk on which they feed their children. Medical writers afford innumerable proofs of ill health, disease, and even death itself in children and adults, where impure milk has been taken as food.

According to Berzelius, the obvious components of milk are cream, curd, and whey. 1,000 parts of cream of cow's milk of a specific gravity of 1.024, contains of

Butter - - - -	45
Curd - - - -	35
Whey - - - -	920
	1,000

The remaining skimmed milk has a specific gravity of about 1.033, and consists of

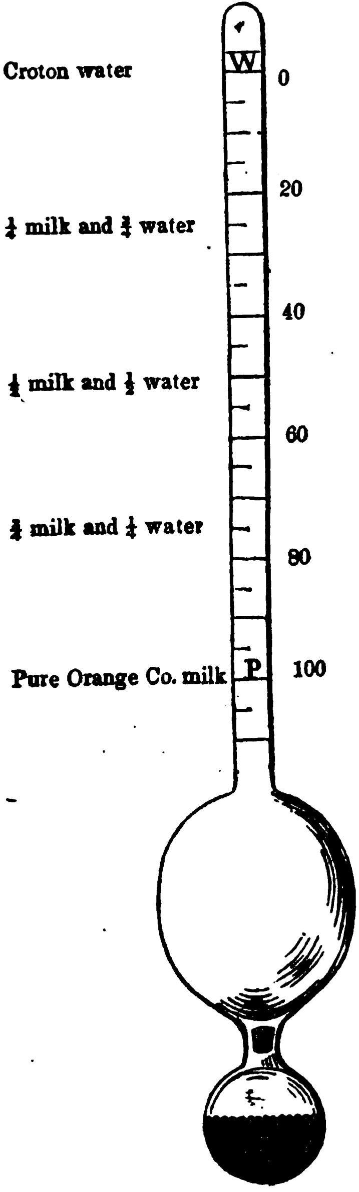
Water - - - - - - - - -	929
Curd with a trace of butter - - - -	28
Sugar of milk - - - - - -	35
Lactic acid, lactate of potash, and a trace of lactate of iron - - - - - -	6
Muriate and phosphate of potash, and earthy phosphates - - - - - -	2
	1,000

If we extract the curd, the remaining substances constitute whey. The curd of milk, or caseous matter, partakes in many of its chemical properties of the nature of albumen; in other respects it resembles vegetable gluten, more especially in the fermentation which it undergoes when kept in a moist state. Hence it may be considered as partaking of the nature both of vegetable and animal food.

The quality of milk, and, consequently, the proportions of the several constituents above mentioned, vary with the breed of the cow, with the food on which she is sustained, with the time that has elapsed since she gave birth to her young, with her age, state of health, and with the season of the year; but in most cases this fluid contains the same substances, though in different quantities. In warm weather milk contains more butter; in cold, more cheese and sugar.

The instrument in question is constructed and for sale at $1 each, including a tin case, by Messrs. Frye and Shaw, 222 Water street, N. Y. and may be described and used as follows:—

LACTOMETER.—(FIG. 51.)



It will be understood by the annexed cut, that the two extremes of the scale of the instrument are based upon Croton water at 60° F., and an average quality of pure Orange county milk during the months of May, June, July, and August, of the same temperature. By mixing the milk and water in equal proportions, and of a temperature as above, the instrument will stand at 50°; when mixed in a proportion of one fourth milk and three fourths water it will stand at 25°, which will indicate that the mixture contains 25 per cent. of milk, and 75 per cent. of water, and so on with other proportions.

How to use the instrument.—Fill the tin tube which accompanies the instrument with a portion of the milk to be tested, and warm or cool it to a temperature of 60° F. Suspend the lactometer in the milk, and note the degree on the scale of the instrument, which is nearest the surface; and the number corresponding thereto will indicate the per cent. of pure milk that the liquid contains.

This instrument was invented by Mr. Frye at the special request of the board of Agriculture of the American Institute, and has received their strongest commendation. D. J. B.

For the American Agriculturist.

THE BEST SHEEP COUNTRY.

Fairfield, Iowa T., August 15th, 1843.

I promised you some account of this Territory, and am now reminded of the performance of my promise by a late number of your paper, in which a writer on sheep-husbandry propounds the inquiry, "What is the best region of the United States for sheep?" I am satisfied I can answer that question by naming Iowa Territory; especially the southern portion of it, which is, in my opinion, better adapted to sheep-husbandry than any other part of the United States. The soil is very rich and fertile, yet highly silicious, consisting of a black vegetable mould, with an admixture of 15 to 20 per cent. of sand. The face of the country is dry and undulating. From the Mississippi, the country ascends gently to an altitude of at least 500 feet above the level of the river, for a distance of 60 or 70 miles. Throughout that distance there is no flat, level land—it is all dry and rolling. The water is absorbed rapidly, or passes off quickly in the numerous streams. Good water for stock abounds. Groves of timber and prairie alternate in beautiful variety and succession. The timber occurs in sufficient abundance for farming purposes, and consists of oak, hickory, elm, sugar-maple, and the usual forest growth of this latitude—41°.

The prairies are covered with a luxuriant growth of grass, on which millions of sheep could be fed. It is said by those who have resided in this territory for four or five years, that a remarkable improvement is perceptible in sheep, after having been a year or two here. *Both carcase and fleece are improved,* the latter in softness and quantity. I know that this is contrary to general received theory and observation, that the quantity and quality of fleeces should improve at the same time. But such is the well-authenticated fact, and certainly I never saw more thrifty animals than those sheep which have been raised in this territory.

The climate, as to temperature, in this part of Iowa, resembles very much that of New Jersey. But little snow falls during the winter months, and *scarcely any* rain. The dry, rolling, silicious soil, and uniform dry climate, seem to constitute this country as eminently a wool-growing region, and as such, it is appreciated by many of its inhabitants already. Large flocks of sheep are constantly coming into this territory from Ohio and Indiana; but they consist principally of the common, coarse-woolled sheep of the unimproved sort, with a slight sprinkling here and there of the Merino and Saxon. The prices of these droves vary from $1.25 per head to $2.00.

If a flock of sheep is enclosed in a field of prairie grass, they soon eat out and destroy the grass, when by sowing on blue grass or timothy, the field is soon covered by the imported grass, and thus a farm is stocked down in tame grass without the expense of breaking up the prairie sod. That this climate is very favorable to sheep-husbandry, is proved by the extraordinary improvement of constitution which takes place among those sheep brought into the territory from the east. Disease is unknown among their flocks here, although the farmers as yet have very imperfect *fixings* for their sheep. Indeed, as yet all the sheep here are kept during the winter without any shelter, and live during the season on the prairies, with occasionally a little corn or oats. Let me add a few words generally on the agricultural facilities and character of this youngest daughter of the republic. There is not in the United States anywhere west, an unbounded tract of fertile territory uninterspersed by broken, wet, or inferior land, like that which lies in this territory between the Mississippi and the Missouri. The whole expanse of land is adapted to cultivation. There is really no inferior land to be found here. Wheat, corn, oats, hemp, flax, and tobacco, and all our northern grasses, grow luxuriantly. Spring wheat is likewise a sure crop. I never saw such heads of spring wheat as I have seen here. They averaged, in a field I examined a few days since, not less than five inches in length—the berry plump and large, the straw bright, and that field will yield, I think, at least 35 bushels to the acre.

The territory is filling up very rapidly. The population in 1840 was 43,000. It is now estimated at 100,000, and is rapidly increasing. Indiana, Ohio, Pennsylvania, and Illinois, furnish us principally with our immigrants. Occasionally a New Yorker comes in, though Wisconsin arrests the immigration of the empire state chiefly. Good water is obtained by digging from ten to twenty feet. Limestone for building, and stone coal abound. The lead region is confined to the northern portion of the territory.

It is surprising how soon your industrious settler makes himself a home and a farm here. He plants himself down, say on a lot of 160 acres, a half or a quarter of which is timber, and the rest prairie. If he hires his work done, he can get his fence, nine rails with stake and rider, made for $1 or 75 cents per rod. His prairie he can get broken up for $1 or $1.25 per acre, and thus for little more than a hundred dollars, he may have fifty acres in cultivation, two months after his settlement. The peach, the plum, and apple, thrive most luxuriantly here. The walnut, the hickory, and hazle-nut, abound. So do deer, wild turkeys, prairie hens, and partridges.

One advantage Iowa possesses over all other new sections of land in the United States, is that it is perfectly healthy. The dry lands, and climate, and great altitude, afford no food for bilious fever to generate. The farmer pursues his avocations free from the prostrating and debilitating effects of those scourges of most new settlements.

To return to wool-growing. I should be much pleased to see a comparative estimate of the productive value of the fine and coarse-woolled sheep in your monthly. Will the *quantity* of wool obtained from a Cotswold or new Leicester sheep compensate for its reduced price? If Merinos will only average 4 lbs. per fleece at 30 cents, they can not be so profitable here as a new Leicester, which will average 8 lbs. of wool at 18 cents per lb. The Merino may indeed consume less food, but that, here, with our boundless prairie meadows and hills, is not a primary consideration.

I apprehend that you can not at the east on your lands worth $40 to $50 per acre, compete in wool-growing with the west, where the lands cost but $1.25. But for all purposes of wool-growing, millions of sheep might be kept moving over the government prairie-lands, without any cost to the owner but that of a shepherd to guard them, and a small expenditure in the summer for putting up prairie hay. I can get any quantity of prairie hay delivered to me cured and stacked, for $2 per ton. But by driving our flocks two or three degrees further south into Missouri, they may be kept all winter on the prairies at a very small cost.

What would be the cost of importing from England *via* New Orleans, into this territory, South-Down sheep, Cotswold, or New Leicesters? What is the price in England of such sheep?

Berkshire hogs and Durhams are quite numerous here, considering the age of the territory, and afford some indication of the intelligence and enterprise of the immigrants who have introduced them. I am much pleased with the country; its climate, the fertility of the lands, the character of its population, the rapidity of its settlement, will enable Iowa to tread rapidly on the advancing steps of her western sisters. I have seen the best lands and most highly-cultivated *farming* districts of the United States, and I do not hesitate to say, that Iowa surpasses them all in everything which makes a country desirable for human occupation.

SAMUEL J. BAYARD.

For the American Agriculturist.

FARMING IN MAINE.

Augusta, Maine, September 9, 1843.

DEAR SIR: I have just returned from a week's journey through the counties of Kennebec, Franklin, and Somerset, in this state, and propose to give your readers a short chapter on "down east" farming, if you deem it of sufficient interest to occupy a space in your journal. The town of Augusta lies on both sides the Kennebec river; its surface is uneven and hilly. The soil is of a sandy loam in some places near the banks of the river; in other places, and especially as you recede from the river, the soil is of strong fertile loam. The land is very much encumbered after getting a short distance from the river, with rock, principally a very good quality of granite, which furnishes substantial materials for fencing and building, and a valuable article for export. The crops are potatoes, corn, spring wheat, oats, peas, and hay; all of which are reasonably good. There is a large quantity of hay pressed for market at different landings on this river.

From Augusta we passed through the town of Readfield, which is one of the best agricultural towns in the county. Although it has a hilly and rock-bound surface, its soil is a strong productive loam, well adapted to grazing, and improves rapidly by cultivation. This town is celebrated for its fine oxen, of which I saw 160 yoke in one team at their cattle show last October. I doubt whether there is a town in New England that can produce finer and better-trained oxen than the town of Readfield, Kennebec county, Maine. I well recollect the performance of the pair of oxen that walked off with the premium last fall. They were attached to a cart loaded with about three tons of stone, the road over which the trial took place had about as much ascent as State street, Albany, from the Exchange to the Statehouse. The team was started from the top of the hill with the loaded cart, and driven down to the plain below, holding their load with the utmost ease. They were then ordered to wheel, and started to make the ascent, which was no trick at all for them. When they got to the steepest part of the hill, they made a halt at the word of command, and after holding the load a moment, they responded as readily to the order to march, and walked up the balance of the hill. They were then driven down the hill again, and as many men got on the cart loaded with stone as there was room, making the load from four and a half to five tons net, and they walked off with the whole as easy apparently as before; stopping again on the hill and starting in its steepest part when commanded. In driving them there was no noise or hallooing; the low words of the teamster and the motion of the goad-stick were all that were necessary to make them perform their duty in a masterly manner. I believe the team belonged to a Mr. Haine, of that town. What I have said of the crops above, is applicable to all the towns through which I passed. The fall feed is remarkably good, and consequently the stock will go into winter quarters in good condition.

We next passed through Mount Vernon and Vienna, both of these towns are hilly and very rocky; they have much more rock than can be converted to any useful purposes. There are some fine farms in these towns, which are under a good state of cultivation; other portions of the towns are new, and require a great deal of patient toil to subdue and bring the land to a suitable condition for profitable cultivation. We now enter the town of Chesterville, in Franklin county, and find the same remarks made in reference to the two last towns applicable to this, except on the branches of the Sandy river, where the soil is sandy on a sandy loam free from rock, and easier cultivated. We then passed through Wilton, a very good town; some parts hilly and rocky, others alluvial on the branches of Sandy river. In this town there is a flourishing woollen factory, which is manufacturing all such goods as the farmer wishes to consume in the woollen line, and furnishes a home market for the surplus produce of the neighborhood. We next came to Farmington, which ranks A No. 1 as a farming town. It has the Sandy river passing through the whole length of the town, with its broad rich bottom. Here is where the cattle show of Franklin was held last year with its superb "pic nic" dinner, which was served up in the Town Hall by its spirited members, and made free to all. Farmington is a fine growing village; I see more building going on here than I have seen this season, excepting at Boston. We now come to the town of Industry, which I think must take its name from the habits of its population; for without industry I am sure they could never make those rock-bound hills yield such fine crops, and feed such fine herds of cattle as we saw there. We stayed over night in this town with Mr. Shaw, who is one of the best farmers of the county, and a man withal, who can not content himself to be housed up during the long winters of 44½° of north latitude. To pass away the time, he takes his teams to the woods and gets a few logs to the banks of the river, to be run in the spring to supply the mills of the lumbermen below. Last winter he had about 40 yoke of oxen in the woods hauling logs, making a pretty good home market for the produce of his farm. He sold his logs a few days ago for $37,000! *a pretty good winter's work for one farmer.* I do not wonder that they call the town Industry. We next come to Anson, in Somerset county, lying on the west bank of the Kennebec river. This is a fine town, with a rich sandy loam on the river, and a fine range of hill-lands back. We here crossed the Kennebec to the town of Madison, which is also a fine agricultural town, lying on the east side of the river.

We now returned to Augusta through the towns of Skowhegan, Bloomfield, Fairfield, in Somerset county, and Waterville and Sidney in Kennebec county, all of which are river towns of the first character; in fact there are few states that can boast a finer farming country than the valley of the Kennebec, as far as I have traversed it, which is about 100 miles up and down the river. The Kennebec river affords an immense water-power, which at no distant day will hum with the busy spindle, giving profitable employment to the capital and laborer of the country, and a ready and profitable market for the produce of its rich valley. The river is navigable for schooners to Augusta, and there is a dam and lock at Augusta that make slack-water navigation for flat-boats, and a small steamboat to Waterville, 18 miles above Augusta. At a reasonable expense the slack-water navigation might be extended much farther up the river.

I am engaged in introducing Barnaby and Mooers plow among the farmers of this section, and find that it meets with the same favor here that it has in other places where it has become known, although there is no section of country in the Union where it would be harder to introduce a new plow, owing to the excellence of those in use. In addition to all the best Massachusetts plows sent here for sale, there are three establishments here that manufacture a better plow than theirs, and the sward-plowing is better done in this state than anywhere else that I have travelled. The potato and corn crops are generally planted on sward furrow turned over in the fall, and the farmers take great pains to have it done well, so as to make the after culture as easy as possible. There have been a number of attempts to introduce the Freeborn plow, which was offered here at half, and in some cases one fourth the price of plows manufactured here, but they won't sell—they are too frail an article. Were it not for the right and left principle and ease of draught of Barnaby and Mooers plow, it would be hard to make inroads upon them; but with the many advantages this plow possesses over all others, it will work itself into favor anywhere.

E. Cornell.

For the American Agriculturist.

NEW METHOD OF MAKING MANURE.

New York, September 12, 1843.

I find in the last number of your paper, a notice of a new work on Manure and Tillage, called the Farmer's Mine, or Source of Wealth; you also give an extract, as a specimen of its value. Having spent some time on Long Island during the present season, I have had opportunity of witnessing the practical result of the process mentioned in said extract. Permit me to give a few examples by way of illustration.

Garret Knowenhoven, Esq., of Flatlands, laid up a heap according to said method, consisting of dry straw, salt hay, etc. On the fifteenth day after laying up, the heap was opened in the presence of a large number of farmers, who, without exception, expressed their surprise and admiration. They all admitted that it presented the appearance and smell of rich stable manure. On the same day his men planted potatoes with it. In the same lot, on one side he planted potatoes with manure from the farm, fine and good; on the other side he planted with a load of horse manure, brought from Brooklyn for the express purpose, and the best he could obtain. The potatoes planted with the new manure, when examined, were far superior to those planted with manure from the farm, and presented even a more luxuriant growth than those planted with the manure from Brooklyn.

A second example I found at East New York, where Mr. Schenck planted corn with the new manure, and alongside of it planted with hog manure, which he considered his best manure. I went with him to look at the corn, when he himself, though before unbelieving, acknowledged that the corn planted with the new manure rather took the lead of the other.

A third example I found in the garden of E. W. Strong, P. M. East New York. This also was decidedly in favor of the new method. Mr. Strong, in addition to the manure made from straw, weeds, &c., took some black muck and threw it into the vat containing some of the liquid which had drained from the heap. After laying a few days, he took the muck and planted several articles with it. It has proved itself equal to the best manure.

Now in view of these several experiments, and others which might be mentioned, I hesitate not to pronounce "the improved method for manufacturing vegetable manure," worthy the attention of every farmer, and if we may judge of the Farmer's Mine from the specimen you have given, no one interested in agriculture will regret supplying himself with a copy.

An Observer.

For the American Agriculturist.

PAULAR MERINOS.

Weybridge, Vermont, July 16, 1843.

A writer in the May No. of the Agriculturist, says, that I have none of the Paular breed of sheep, and for me to use the "name of Paulars is beyond all question libellous," &c. He appears to arrive at the conclusion from a description and picture of one of my stock bucks, which appeared in the August No. of the Albany Cultivator [for 1842.] The engraver, as I have heretofore mentioned to you, did not do justice to the head and neck, the other points in the picture are well executed. The face was too flat, nearer the representation of the horned gnu of southern Africa, and the horns as nearly represent a couple of scythe snaths as they did the horns of the original. I would refer Mr. Examiner to the second volume of the N. Y. State Transactions of 1842 for a correct likeness of one of my stock bucks.

These two sheep sheared in six of their heaviest fleeces, 74½ lbs. of washed wool; their nine fleeces weighed 97 lbs. and 13 ounces. Pedro is five, and Fortune is four years old; these two sheep in the intermediate time have tupped over 1,000 ewes, and many of their stock equal the sires for size, and beauty, and weight of fleece. "Paulars, old Merinos," or anything that Examiner is not willing to call them, it matters not to me; they are ahead of anything that I have seen, and it may be possible that I have seen with my own eyes, and handled with *my own hands*, as many Merino sheep as this city gentleman. This variety of sheep have the best points in carcase among the finer breeds, and the length and quality of wool are good; the fleece very thick and solid; wooled all over, many of them from the extremity of the nose to the dew claws. I never ranked them among the Saxonies for fineness. Examiner tells us mine are a very coarse breed of sheep. He says, "the Paulars are among the *best* and *finest* of the travelling sheep of Spain." If he intends to convey the idea that they equal, or are superior to the Saxons for fineness of fleece, then he has received some false or true light which I had not before been apprized of.

Will the gentleman be so good as to answer the following questions. Examiner says, that "for many years the exportation of the Paular wool from Spain was strictly prohibited, the whole of it being retained for the use of the royal manufactories of cloths." If *Paular* is so very valuable above other wool, why do we not have a regular quotation of that kind of wool, as we now have the right of importing every quality of wool from Spain? Why is it that Saxony wool is always quoted highest at home and abroad? If *there is no doubt* about what kinds of sheep should be classed among the fine-woolled, why did the committee in classing the several kinds of sheep, use so much care as to particularly describe what breeds should be considered as coming under the head of fine-woolled?" Why did Examiner misconstrue the intent and plain meaning of my communication about the quality of the Paular Merinos, that appeared in the Cultivator, by making very liberal use of one sentence, and leaving out the next? Where is his authority for asserting that "there is no such thing as a Paular buck, *nor anything deserving the name in the whole country?*"

There is one flock in this county of 400, in the possession of a son whose father purchased some twenty years ago direct from the importer, and these have never been adulterated by *any other breed*. My sheep, a part of them, are a branch from this flock of "*Simon Pures*," and the rest are from celebrated breeders, who represent them as pure descendants of the "Paular or *old-fashioned Merino*." They have every appearance of that variety, as I understand them. Examiner thinks there "should be a greater and more evident degree of *throatiness*." I would ask him, as he seems to know all about the Paulars, if *every* sheep of that variety have that peculiar mark equally developed?

There is a mark about my sheep I would like to have Examiner explain. What race is distinguished for that peculiarity? It is this: most of the lambs, when first dropped, show some sandy marks about the body, some one or all of the legs may be of a sandy color, some sandy spots on the back or side the size of a cent or larger; and most invariably about the eyes, which can be seen at all ages. There are other points of more value, such as good size, very large limbs, strong constitution, loose skin about the neck and breast, and frequently along the sides; the wool has a very curly appearance, filled with gum, yolk or oil, before cleansing, and sells here now for thirty-seven cents per pound.

SOLOMON JEWETT.

From the Magazine of Horticulture.

OBITUARY.

DIED, in Roxbury, on the 13th of August, John Prince, Esq., at the age of 73 years. For many years Mr. Prince has lived a retired life, and during that period his name has been so seldom before the public, that many have almost forgotten the important part which he formerly took in the progress of agricultural and horticultural improvement.

Mr. Prince at one time owned one of the finest gardens around Boston. He was one of the first to introduce from abroad many of the new kinds of pears and other fruits, from which the amateur is now reaping such rich results. He also introduced many new green-house plants; his collection, fifteen or sixteen years ago, was one of the largest in the vicinity. Almost the first greenhouse plant we ever purchased or possessed we had from Mr. Prince's garden. It was a small specimen of the Lantana camara, and so strong was the impression made upon us by the beauty of the flower, that we have ever since had plants in our collection.

Mr. Prince was, from its first organization, an active member, and a trustee, of the Massachusetts Agricultural Society. He imported the first cast-iron plow, and he was the first to propose a plowing-match for the trial of this valuable implement.

To the active life of Mr. Prince, and his merits as an agriculturist, the public are deeply indebted; his private virtues were equal to his public worth: he was a generous townsman; and his integrity gained for him many friends, whose respect and esteem for his virtues increased to the period of his death.

From the American Agriculturist Almanac.

SOUTHERN CALENDAR FOR OCTOBER AND NOVEMBER.

To the sugar-planter, as well as the cotton-grower, October and November are the most important months in the year. To the cotton-grower, the work of these months will be nearly the same as that of September; as to the sugar-planter, it will claim his special attention. In the early part of October, let him commence and get everything in readiness for cutting and grinding his cane. Repair the roads leading from the cane fields to the mill, if necessary; put your carts and yokes in order; procure and sharpen the knives or hooks for cutting the cane; see that the mills or rollers are properly geared, well oiled, and are clean. If your business will warrant it, procure by all means a steam-engine, rather than use horses or mules in grinding. See that the kettles are well set, and that the flues are strong and cleared of filth. Put in order the coolers, and all minor implements used in the operations. Also prepare barrels or hogsheads for filtering; and look to the gutters or conductors for conveying the juices or syrups, and see that they are tight, and properly fitted to your work. Draw and split fuel for boiling, if it has not been done before.

By the last of October, in ordinary seasons, more or less of the cane attains its usual maturity in Florida, and Louisiana. When this period arrives, the first thing to be done is to provide for future crops. Give early attention to the saving of seed, on account of the injury which seed-cane receives by frost, and which is liable to occur before the middle of November. The general rule observed in saving cane for planting, is to reserve such a portion of the crop as is the least valuable for grinding. Hence, those fields which have produced cane from the same stubble for two, three, or four years, and which now require, from the stinted growth they produce, to be replanted with cane or some other crop, are selected to furnish seed-canes. The canes from such fields are small and short, having the joints nearer together, each of which sends up shoots called rattoons. One acre of such rattoons is sufficient, in ordinary cases, for the planting of three acres of land. They are cut near the ground, and carted to the vicinity of the fields where they are to be planted out, and then formed, when not planted as soon as cut, into long beds, about fifteen feet wide, which are called *mattresses*. These are made by commencing at one end of the bed, and placing a row of canes, with their tops on, across it—the tops directed outward. Upon this a second row is laid, so that the buts are placed about eight inches or a foot in advance of those of the first row. Upon the second row a third is placed in like manner, and so on. By this arrangement the lower part of the stalk is preserved from the cold by the tops, except in two or three layers across that portion of the mattress last formed, where the protection is afforded by four or five inches of earth.

A great part of the planting may be done with about three feet of the rejected cane-tops, to which a greater portion of the green leaves are attached at the time of gathering the crop. These, when not reserved for planting, should be left on the field for the protection of the stubbles; but when cut for planting, it is better to cut them one or two joints longer than usual, and to form them into windrows across the field. In this case, from two to four rows should be thrown into one, and arranged as respects the overlapping, like the mattresses above described. The fields from which these tops are obtained, are often those that were planted the previous year, and in which the cane is high, and somewhat prostrated at the beginning of the grinding season. Hence it is necessary to cut this earlier to prevent it from rooting at the lower joints. When the force of the plantation will permit, the land should be planted as far as the seed-cane is cut. Canes planted at this season should be in the driest fields, and covered to the depth of three or four inches, in order that they may take an earlier start next spring, than if they remain in the mattresses during the winter. The remainder, and by far the greatest part of the planting, may be deferred until the grinding season is over, which varies from the 20th of December to the middle of January; and often it is not completed before the first of March. The covering given to the canes is more and more shallow as the season advances, until the close of February, when it rarely exceeds two inches.

In preparing the ground for planting cane, it should be first thoroughly ditched or drained, and then plowed and harrowed; after which it should be drilled at distances varying from 33 inches to six feet apart, according to the newness and strength of the soil. Into these drills or furrows there should be laid, three or four inches apart, two parallel rows of cane-tops, from two and a half to four feet in length, and covered with earth at a depth corresponding to the season of the year in which the planting is done.

In the latter end of October, or early part of November, prepare for preserving sweet potatoes for the winter. Select a dry place, level the earth, and lay a bed of dry straw so as to form a circle of about six feet in diameter. On this straw pile up the potatoes until they form a cone four or five feet high, over which spread a little dry grass. Then cover the entire cone with corn-stalks set up endwise, with the buts resting on the ground, and the tops reaching over the apex, of a sufficient thickness to conceal all of the potatoes. Then cover the whole pile with earth at a depth of at least a foot, without leaving any air-hole at the top, as is frequently done. A small shelter should then be made so as to prevent the rains from washing off the earth. This may be done by inserting in the ground about the pile four forked stakes, on which rails may be placed to support the covering, which may consist of boards, bark, thatch, or other substances. Potatoes can be preserved in this manner until June, nearly as fresh as when first put up.

In these months dress burr artichokes, taking away all their suckers, except three to each stock, open their roots, lay about them new earth and manure, and plant out suckers for another crop. Trim and dress asparagus beds by cutting down the stocks and burning them over the beds. Then dig between the shoots, level the beds, and cover them three fingers deep with fresh earth and manure, mixed. Continue to plant celery, set it in gutters as it grows, and hill up; sow spinach, lettuce, and raddish seeds, and plant out evergreens—they will do now perhaps better than in April. Plant vines or beans, and early peas.

For the American Agriculturist.

NORTHERN CALENDAR FOR OCTOBER.

Kitchen Garden.—Keep the crops of spinach entirely clean; they can now be thinned out, leaving the plants four or five inches apart. Lettuces for early spring use should be treated in the same way. Those for late fall use should be transferred to frames, and protected from frost during the night. The same mode can be adopted with cabbage plants for fall and winter use. During the latter part of the month cut down the asparagus tops, and give the bed a coat of well-rotted stable manure to the depth of two or three inches. This can be done, however, as well next month.

Fruit Garden and Orchard.—Continue propagating by layers and cuttings. Plant beds of strawberries that may have been omitted last month; they will be less likely to suffer from the heat of the ensuing summer, than if planted in the spring. Most kinds of hardy fruit and forest trees may now be trimmed and cleared of lateral shoots and suckers. All kinds of hardy deciduous trees and shrubs can be transplanted this month, as soon as they have shed their leaves. Fall planting is preferable for good-sized trees, as during the winter they can firmly establish themselves, and be ready to throw out sufficient roots in the spring to withstand the heats of summer. Small seedlings had better be left till spring, as they are liable to be thrown out of the ground by the frost in the winter.

Flower Garden and Pleasure Grounds.—About the middle or latter end of the month plant tulips, hyacinths, &c. Select a warm, mellow soil, and let it be highly manured with well-rotted compost. The ranunculus and anemone can now be planted, and all other varieties of bulbous and tuberous-rooted flowers. Seeds of bulbous and tuberous-rooted flowers can now be sown to obtain new varieties. Continue to transplant perennial and biennial flower roots. Plant some bulbous roots in flower pots for winter blooming. The latter part of the month, pot your tender roses and everything else that requires protection in the winter, and have them ready to move in on the sudden approach of any cold weather. Flowering and ornamental shrubs can now be found, and also propagated by layers, cuttings, and suckers. The latter part of this month new pleasure grounds may be formed, and all hardy deciduous trees may be transplanted, as soon as they have shed their leaves. Live hedges can now be planted. Continue to mow your lawns, clean the gravel walks, cut and carry away all weeds, decayed flower-stems, fallen leaves, &c., and prepare ground for spring planting.

S. B. Parsons.

We here present the list of premiums of the Agricultural and Horticultural Departments only, of the Show and Fair of the American Institute, to be held the present month in this city. The manufacturing and mechanical departments are equally liberally patronized, but as these particular branches do not so immediately concern our readers, we do not publish them. This will undoubtedly be the richest and most interesting exhibition ever yet got up by the Institute, and we particularly invite attention to it. The different conventions to be held at the same time will add to the attractions of the scene. The American Institute is growing every day more important, and the members are taking very active measures to still further increase its usefulness, all of which will be announced in due time.

AGRICULTURAL AND HORTICULTURAL DEPARTMENT

Of the 16th Annual Fair of the American Institute of the city of New York, 1843.

The Board of Agriculture have the pleasure to state, that liberal and extensive arrangements have been entered into for a plowing match, an exhibition of pure-blood and other cattle, and a horticultural show. The attention of farmers, stock breeders, and horticulturists, is respectfully requested to the following regulations:

Plowing Match.—The plowing match will take place at Paterson, New Jersey, on Monday, the 16th day of October.

For the best plow, silver cup.

For the second best plow, silver medal.

The following premiums will be awarded for the best plowing, performed in one hour, on one eighth acre of green sward:—

Best plowing, silver cup, value $8.

Second best plowing, silver medal.

Third best plowing, diploma.

Exhibition of Pure-Blood and Native Cattle.—A suitable location convenient to the garden will be completely arranged with sheds, stalls, and pens, for the ample and safe accommodation of the various kinds of stock presented. Messrs. Choules, Emmet, Schuyler, Hall, and Clark, the Executive Committee, will have the superintendence of the arrangement of the cattle exhibition. Feed of every description will be provided on the ground at the cheapest possible rate for those who wish to purchase; and as no entrance money for cattle will be required, and exhibiters may bring their own feed, the expenses of the occasion will be greatly reduced. Careful and experienced men will be in attendance to assist in taking charge of the animals.

LIST OF PREMIUMS ON CATTLE.

IMPROVED STOCK.

Bulls.—For the best Durham bull, 2 years old and upward, gold medal or silver cup, $15.

For the best Hereford bull, 2 years old and upward, gold medal or silver cup, $15.

For the best Devon bull, 2 years old and upward, gold medal or silver cup, $15.

For the best one-year-old bull, of any improved stock, silver cup, $10.

For the best Durham bull calf, silver medal, $5.
For the best Hereford " " 5.
For the best Devon " " 5.

Cows.—For the best Durham cow, 3 years old and upward, gold medal or silver cup, $15.

For the best Hereford cow, 3 years old and upward, gold medal or silver cup, $15.

For the best Devon cow, 3 years old and upward, gold medal or silver cup, $15.

For the best Durham heifer, one year and upward, silver cup, $8.

For the best Hereford heifer, one year and upward, silver cup, $8.

For the best Devon heifer, one year and upward, silver cup, $8.

For the best Durham calf, one year and upward, silver medal, $5.

For the best Hereford calf, one year and upward, silver medal, $5.

For the best Devon calf, one year and upward, silver medal, $5.

NATIVE STOCK.

Bulls.—For the best native bull, 2 years old and upward, gold medal or silver cup, $15.

For the best native bull, one year and upward, silver medal, $5.

For the best bull calf, silver medal, $5.

Cows.—For the best cow, 3 years old and upward, silver cup, $10.

For the best heifer, one year and upward, silver medal, $5.

For the best heifer calf, silver medal, $5.

Working Oxen.—For the best pair of working oxen, silver cup, $15.

For the second best pair, silver medal, $5.

Fat Cattle.—For the best pair of fat cattle, gold medal or silver cup, $15.

For the best fat single ox, silver medal, $5.

SHEEP.—*Long Wools.*—For the best long-wool buck, silver cup, $8.

For the best long-wool ewe, silver cup, $8.

For the best long-wool lamb, silver medal, $5.

Middle Wools.—For the best middle-wool buck, silver cup, $8.

For the best middle-wool ewe, silver cup, $8.

For the best middle-wool lamb, silver medal, $5.

For the best wether, silver cup, $8.

Swine.—For the best boar of any breed, silver cup, $8.

For the second best do., diploma.

For the best sow of any breed, silver cup, $8.

For the second best do., diploma.

For the best shote, medal, $5.

Horses.—For the best stud horse, gold medal or silver cup, $15.

For the second best do., silver medal.

For the best brood mare, gold medal or silver cup, $15.

For the second best do., silver medal.

For the best colt, not exceeding 2 years old, silver cup, $8.

For the best Jack, silver cup, $8.

Mules.—For the best pair of working mules, silver cup, $10.

Poultry.—For the best pair of turkeys;
For the best pair of Bremen geese;
For the best pair of tame geese;
For the best pair of mongrel geese;
For the best pair of Muscovy ducks;
For the best pair of common ducks;
For the best pair of Dorking fowls;
For the best pair of Bucks co. fowls;
For the best pair of Spanish fowls;
For the best pair of Poland fowls;
For the best pair of capons;

25 volumes of a work on American poultry will be distributed as premiums.

To avoid the confusion incident to exhibitions of this kind, the owners and exhibiters of cattle are urgently requested to observe the following regulations.

1. All entries of stock must be made, either verbally or in writing, at the manager's room at Niblo's Garden, on or before Monday, the 16th day of October, with full pedigrees of the animals, their breed, ages, owners' names, &c., and with such observations, as to their food, thrift, constitution, milking or fattening qualities, as they may see fit to append. This is absolutely necessary, that the Secretary may be able to prepare a catalogue in time for the use of the examining Committee; and neither the secretary nor the committee will be responsible for the omission of any animal on the catalogue, if this rule is not complied with.

2. All animals must be upon the ground by 9 o'clock A. M., on Wednesday, Oct. 18, attended by their owners or keepers, for the inspection of the examining committee.

3. The judges upon stock will meet at Niblo's Garden, at half past 8 o'clock A. M., on the 18th day of October, to organize, and proceed immediately to the discharge of their several duties. On the completion of their awards, the committees will append to each prize animal a certificate designating the particular premium awarded.

4. No animals can be removed after entry without the consent of the executive committee.

5. All animals intended for sale (which this year will be by private contract), will be so designated on the catalogue.

6. All animals will be admitted on the ground designated for the exhibition, on the presentation of a ticket, which the owners or proprietors will obtain from the secretary at the time of entering the same.

7. The rule in force at former fairs, of excluding animals which have already taken prizes of the American Institute, is now abolished, and the premiums are now open for competition without reservation.

HORTICULTURAL EXHIBITION.

The Committee on Horticulture, in conjunction with the Agricultural Board of the American Institute, encouraged by the growing spirit of improvement, enterprise, and generous emulation, manifested by the cultivators of the soil at the last anniversary, are making extensive arrangements for their exhibition at the Sixteenth Annual Fair, next October.

The committee hope, by making an early and earnest appeal to the producing classes, that a still greater display of the variety, richness, beauty, and perfection of agricultural and horticultural productions, will be exhibited to the public this year, than on any former occasion. With such anticipation, they would suggest to the orchardist, that he keep an eye to the preservation of the choicest of his fruit. The farmer and the gardener are also reminded that a free use of the plow and the hoe is essential to the production of good specimens of edible roots.

The committee, with a view to induce the hardy yeomanry of our country to study subjects connected with their important occupation, have been again induced to offer as premiums such publications as were considered by them appropriate to the different objects; and as each volume will contain a testimonial beautifully printed and embellished with gold, it is presumed that competitors will prefer them to other premiums: if, however, any gentleman to whom a book is awarded should prefer a diploma, or a copy of any other work than the one offered, he will be accommodated, provided the one he makes choice of be of equal value.

At our last annual fair, the decorations of the horticultural room were pronounced by the tens of thousands of visiters as the centre of attraction. The committee trust that all cultivators of flowers, both professional and amateur, will again unite in encouraging a more general taste for the beauties of nature. Especially do we desire to enlist the ladies of our city and its vicinity, who are so appropriately and successfully employed in floriculture. It is hoped that they will combine their efforts in fostering an employment that is so eminently calculated to attach their companions to home, and thus increase domestic happiness.

As the committee, from the lateness of the season in which the fair is held, anticipate a deficiency in some of the articles for which premiums are offered, they are authorised to announce, that although the managers feel at liberty to withhold premiums, where the articles are deemed inferior in their kinds by the judges, they have nevertheless determined to award all the book premiums offered, should sufficient articles not previously provided for merit such premiums; and they have resolved farther, to award fifty copies of the Reports of the Institute, published by the senate of the state of New York, as discretionary premiums for supplies of flowers, or for such other articles in the horticultural room as may be deemed by the judges as entitled to especial distinction.

Contributors are informed that the large room occupied last year in the north wing of the saloon, in Niblo's Garden, will be appropriately fitted up for the reception of agricultural and horticultural productions, and that efficient measures will be adopted to insure a full and fair representation of each exhibiter, whose name will be attached in legible characters to every article he may offer for public inspection.

All articles intended to be exhibited should be delivered as early as possible on Monday, the ninth of October, in order to have them properly arranged by 9 o'clock on Tuesday morning, at which time the room will be opened to the public.

Cultivators of flowers are respectfully invited to furnish fresh supplies on the morning of each day, which will be duly appreciated, and recorded on the annals of the institute.

The following premiums are offered:—

Flowers.—For the best and greatest display of greenhouse plants, a silver medal.

For the best and greatest variety of cut flowers from greenhouse plants, Mrs. Loudon's Ladies' Flower Garden,

For the second best variety of cut flowers, Hovey's Magazine.

For the third best variety of cut flowers, American Flower Garden Directory.

For the best and most beautiful bouquet, a silver medal.

For the second best bouquet, Mrs. Loudon's Ladies' Flower Garden.

For the third best bouquet, American Flower Garden Directory.

For the best and greatest display of dahlias and other flowers exhibited during the fair, a gold medal.

For the second best supply, a silver medal.

For the third best supply, Mrs. Loudon's Ladies' Flower Garden.

For the fourth best supply, Downing's Rural Architecture.

For the fifth best supply, Downing's Cottage Architecture.

For the sixth best supply, Hovey's Magazine of Horticulture, &c.

For any farther large supply, American Flower Garden Directory.

For the best assortment of American seedling dahlias, silver medal.

Fruit.—For the best fruit farm, a gold medal.

For the most successful vineyard culture of the native grape, silver medal.

For the best twelve table apples, Bridgeman's Gardener's Assistant.

For the best twelve winter apples, Kenrick's American Orchardist.

For the best cultivated cranberries, Smith's Productive Farming.

For the best and greatest variety of house grapes, gold medal.

For the second best variety of house grapes, silver medal.

For the third best variety of house grapes, Downing's Cottage Architecture.

For the best twelve bunches of Isabella grapes, Downing's Rural Architecture.

For the best twelve bunches of Catawba grapes, Kenrick's American Orchardist.

For the best twelve bunches of other variety, Buel's Farmers' Companion.

For the best and greatest variety of Peaches and nectarines, silver medal.

For the best twelve peaches (freestones), Kenrick's American Orchardist.

For the best twelve peaches (clingstones), Bridgeman's Gardeners' Assistant.

For the best twelve nectarines, Kenrick's American Orchardist.

For the best and greatest variety of pears, silver medal.

For the best twelve table pears, Kenrick's American Orchardist.

For the best twelve winter pears, Bridgeman's Gardeners' Assistant.

For the best twelve plums, Buel's Farmers' Companion.

For the best twelve quinces, Kenrick's American Orchardist.

Vegetables.—For the choicest assortment of culinary vegetables, silver medal.

For the best and greatest variety of vegetable roots for cattle, silver medal.

For the best twelve blood beets, United States Farmer.

For the best twelve sugar beets, American Agriculturist.

For the best twelve mangel wurtzel beets, One Volume of the Cultivator.

For the best six heads of Cape broccoli, Bridgeman's Gardeners' Assistant.

For the best six heads of cauliflower, Buel's Farmers' Companion.

For the best field of cabbage, silver medal.

For the best twelve heads of drumhead cabbage, Report of State Agricultural Society.

For the best twelve heads of Savoy cabbage, Faulkner's Farmers' Manual.

For the best twelve carrots for the table, United States Farmer.

For the best twelve carrots for cattle, American Agriculturist.

For the best twelve roots of white celery, Report of State Agricultural society.

For the best twelve roots of red celery, Dana's Muck Manual.

For the best six egg plants, Bridgeman's Gardeners' Assistant.

For the best peck of white onions, Buel's Farmers' Companion.

For the best peck of yellow onions, Faulkner's Farmers' Manual.

For the best peck of red onions, Smith's Productive Farming.

For the best twelve parsneps for the table, American Agriculturist.

For the best twelve parsneps for cattle, United States Farmer.

For the best peck of American seedling potatoes, silver medal.

For the best peck of potatoes for the table, Bridgeman's Gardeners' Assistant.

For the best peck of potatoes for cattle, One Volume of the Cultivator.

For the best three cheese pumpkins, Dana's Muck Manual.

For the best three cattle pumpkins, Buel's Farmers' Companion.

For the best and largest pumpkins, Productive Farming.

For the best twelve roots of salsify, Bridgeman's Gardeners' Assistant.

For the best three squashes, Faulkner's Farmers' Manual.

For the best and largest squash, Dana's Muck Manual.

For the best half peck of tomatoes, United States Farmer.

For the best peck of white, flat, or round turneps. One Volume of the Cultivator.

For the best peck of Yellow, flat, or round turneps, United States Farmer.

For the best twelve roots of Russia turneps, American Agriculturist.

For the best twelve roots of long white turneps, Bridgeman's Gardeners' Assistant.

For the best sample of hops, not less than three pounds, American Agriculturist.

Agricultural Products.—For the best and greatest variety of Indian corn, silver medal.

For the best 40 ears of white Indian corn, Two Volumes of the American Agriculturist.

For the best 40 ears of yellow corn, Two Volumes of the Agricultural Report of the State of New York.

For the best bushel of wheat, silver medal.

For the best bushel of rye, Four Volumes of the Cultivator.

For the best bushel of Oats, Planters' Guide.

For the best bushel of barley, Two Volumes of the Cultivator.

For the best bushel of buckwheat, Planters' Guide.

For the best specimen of Egyptian corn, American Agriculturist.

Products of the Dairy.—For the best specimen of butter, not less than 100 lbs., silver cup.

For the best specimen of cheese, not less than 100 lbs., silver cup.

A discretionary premium for second best of each of the above articles.

Garden Implements, Ornaments, &c.—For the greatest variety and best-finished garden implements, gold medal.

For the invention of any new and useful agricultural or horticultural implement, silver medal.

For the best fountain, silver medal.

For the best vase, Ewbanks' Hydraulics.

For the best specimen of statuary for ornamenting gardens, silver medal.

For the best-constructed sun-dial, Report of the State Agricultural Society.

For the best portable machine for watering gardens Ewbanks' Hydraulics.

For the best steel socket saw for trimming trees, American Agriculturist.

For the best specimen of fruit and flower stands, Flower Garden Directory.

For the best wire-work for training creeping plants, One Volume of the Farmer.

For a display of rustic work, American Agriculturist.

A special circular to silk culturists and manufacturers has been issued by the American Institute, containing among other things the following questions.

Other circulars have been issued to the governors of every state, members of congress, &c., in order to collect correct information, experimental, statistical, &c.

To aid our correspondents, we present two series of questions to be answered. If you are a silk-grower, we ask as follows:—

1. How long have you fed worms? and what have been the *general results* each year?

2. What kind of a building do you use? and how is the temperature regulated, if regulated at all?

3. Have you ever fed in an *open shed or tent?* If so, state the results.

4. What variety of silk-worm do you prefer?

5. What kind of trees do you use, and how do you manage them?

6. Have you tested and found any difference between early and late feeding?

7. Can you state the cause or causes of bad success in feeding, in any case or cases among your acquaintances engaged in the business?

8. Have you tested the use of the mulberry leaf, in its green or dry state, for paper? If not, will you do it this season, and communicate to me the results?

9. Have you tried any process, by water or dew rotting, to separate the bark of the young mulberry shoots from the woody fibres, so as to convert it into paper or silk fabrics? If not, will you do it the present season, and communicate as above?

10. Any other information on any part of the silk culture, or any suggestions on the general subject, will be thankfully received.

If you are a manufacturer, please answer as follows:—

1. How long have you been engaged in manufacturing silk?

2. What varieties of silk goods do you manufacture?

3. What amount of raw silk do you work up annually?

4. What amount of capital have you invested in the business?

5. What number of hands—male, female, and children—do you employ?

6. As a manufacturer, what is your opinion in regard to the quality of American raw silk, properly reeled, compared with the foreign article?

7. As a manufacturer, what is your opinion as to the comparative quality of the silk made from the different kinds of trees in common use: the Multicaulis, Cartius Asiatics, Brusa's, Alpines, Italian Whites, and the native American Mulberry?

8. In the present tariff on silks, are any modifications needed in order to make it answer the designs contemplated in establishing it?

9. What are your views in regard to the whole silk business as a permanent branch of American industry? Is the enterprise feasible?

To the Competitors for Premiums in Agriculture, at the 16th Annual Fair of the American Institute.—The act of the legislature of this state, of May 5th, 1841, requires that "before any premium shall be delivered, the person claiming the same, or to whom the same may be awarded, shall deliver in writing to the president of the society, as accurate a description of the process in preparing the soil, including the quantity and quality of manure applied, and in raising the crop, or in feeding the animal, as may be, and also of the expense and product of the crop, or of increase in value of the animal, with the view of showing accurately the profit of cultivating the crop, or feeding or fattening the animal."

You are respectfully requested to furnish such description to the clerk, at the time of entry.

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GENERAL PROGRAMME, AS FAR AS COMPLETE.

Friday and Saturday, Oct. 6th and 7th.—Contributions of articles will be received.

Monday, 9th.—They will be arranged.

Tuesday, 10th.—The exhibition will open for visiters at 9 A. M., and continue till 10 P. M., through the fair. Introductory address 7½ P. M., in Niblo's Saloon. Fireworks 9½ P. M.

Wednesday, 11th.—Address in saloon at 7½ P. M.

Thursday, 12th.—Silk Convention at 10½ A. M. Address in saloon at 7½ P. M.

Friday, 13th.—Silk Convention continued.

Saturday, 14th.—Address in the saloon at 7½ P. M. Fireworks at 9½ o'clock.

Monday, 16th.—List of cattle, horses, &c., to be delivered at the managers' room, at Niblo's garden. Pedigrees signed by the owners required. The plowing exhibition and address at Paterson.

Tuesday, 17th.—Making catalogue of cattle. Breeders' Convention.

Wednesday, 18th.—Cattle exhibition. The cattle must be on the ground by 9 A. M.

Thursday, 19th.—Last day of cattle exhibition. Address on Agriculture, 7½ P. M.

Friday, 20th.—Anniversary Address by Hon. D. D. Barnard of Albany.

A number of other addresses will be delivered, &c., &c.

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FOREIGN AGRICULTURAL NEWS.

By the steampackets Britannia, and Caledonia, we have our full files of European journals to the 5th September.

Markets.—*Cotton* has continued to advance steadily since our last, with very large sales, notwithstanding the immense amount of about a million of bales on hand at Liverpool and other ports. This advance has taken place principally on account of the ascertained short crop of the present season in this country; the diminished quantity, however, from Brazil, and the East Indies, together with a general revival of the manufacturing and other branches of business, have undoubtedly had their effect in assisting to produce it. During the first week in September, 63,000 bales of cotton changed hands, and the price upon the whole average may be set down as having advanced full ½d. per lb. for the past month. The *harvest* in England is tolerably promising, and both grain and flour are dull, and to be had at lower rates. *Cheese* of the better qualities is much wanted. *Beef, Pork,* and *Lard,* light stocks are on hand, and sales brisk. *Pork* and *Lard,* especially, have an upward tendency. The duty on *Lard-oil* is now fixed at 20 per cent., and the article begins to attract attention. Irish *Butter* is so low, that it precludes the chance of anything being profitably done in the American article for the present.

Money is so abundant, and the difficulty of advantageously employing it so great, that the principal bankers have come to a resolution of lowering the rates of interest on deposites to one and a half per cent.

American Stocks continue firm, without any large amounts offered for sale. If Pennsylvania and Maryland would only provide for the payments of their interest, the other delinquent states, being known as new and comparatively poor, it would have a beneficial effect, and no doubt raise the value of all American securities. It will be a burning shame, if the interest on their public debts is not immediately provided for after the meeting of the Pennsylvania and Maryland Legislatures.

London Farmers' Magazine.—*Agricultural Statistics.*—With a view of eliciting useful information for his contemplated reports, and to enable him to make them more complete, Mr. Henry Colman, from the U. S., has issued a minute circular to the British farmers, which we hope will be fully responded to. If we can find space, we shall give place to it hereafter.

Sale of a Short-Horn Heifer.—Mr. Parkinson sold a yearling heifer of this breed, at the late meeting of the Yorkshire Agricultural Society, for 200 guineas.

Curious New Breed of Cattle.—T. White, Esq., of South Mimms, Middlesex, has been devoting himself for many years to produce a new breed of cattle, which are of a uniform color, black and shuted white, forming the most picturesque herd in a park which can be imagined. They are between the Galloway and Suffolk breeds, and combine the good qualities of size and aptitude to fatten, with superior milking and small bone.

Agricultural Schools.—We notice in Prof. Johnstone's Tour in Sweden, that several of these schools are already established there, and that the government proposes immediately increasing their number to twenty. When shall we be able to say the same in our own country?

A Double Pansy.—We find in the Dundee Warder, that a double pansy has at last been grown by Mr. Rattary of Errol. It is described as being a very magnificent flower, with about forty petals, is well built, and the colors distinct. It is thought to be the only one in Great Britain.

Exportation of Stock to France and Italy.—A considerable number of the best varieties of English cattle and sheep have been ordered from France and Italy, with a view of improving the domestic animals in these countries.

Farmers' Journal.—*Culture of Flax.*—Considerable attention is paid to this subject at present in England; more it seems on account of the seed than the lint, for they consider this invaluable as feed for stock, crushed and mixed up with water and coarser grains.

The Yorkshire Agricultural Society.—The annual meeting took place at Doncaster 2d of August. This society is second only in importance to the Royal Ag. Soc., and in some respects its shows are usually superior. There was a great display of stock, agricultural implements, &c., and a numerous assembly present. The speeches were better than any we have ever before seen reported at an English agricultural meeting; being of a thoroughly practical character, and almost entirely divested of the fulsome laudations and generalities so common on such occasions. The Doncaster Chronicle says, "The show of stock generally was considered exceedingly good, and elicited the commendation of the judges. In class I., which comprised the aged bulls, there was nothing of course to equal the Duke of Northumberland, shown last year; (see his portrait in last May No. of American Agriculturist;) but independent of this animal, which was indeed a rarity, the cattle entered for the premiums in this class were superior.

Annual Meeting of the Highland Agricultural Society.—This was held in the month of August, at Dundee, with increased interest; 764 animals were exhibited, and a large concourse of members and people were in attendance. We have space only for a few details. One of the most extraordinary exhibitions in the catalogue, was that of Mr. James Campbell of the Dundee Public Seminaries. It consisted of magnificent plants of oats and barley, grown from seed which had undergone a certain chemical preparation, and without the aid of any manure whatever. Such a mode of culture is at variance with all practical experience; but Mr. Campbell declares that his prepared seeds, which have produced these strong healthy plants, were sown by him on land which, to his certain knowledge, had had no manure of any kind for eleven years; and he declared himself quite ready to verify his statement by experiment, and said that he was willing at any time to impregnate with his chemical preparations the seed which any member of the society should send to him for that purpose, so as to enable gentlemen to satisfy themselves fully as to the efficacy of this wonderful mode of culture.

Professor Johnstone delivered two lectures on the application of science to agriculture, which it is our intention to publish hereafter. Mr. Colman from the U. S. was present, and made a speech highly laudatory, though truly so, of the superiority of Scotch Agriculture.

The annual show of the Highland Society for 1844 is fixed to be held at Glasgow.

Number and Value of Sheep in England.—These are estimated at about 32,000,000, the annual value of whose wool is £7,000,000, about $33,000,000. This manufactured into cloth, is estimated to be worth at least $100,000,000.

Fattening Cattle.—We find it common in France, and many parts of the continent, to fat their cattle by souring the grain fed to them. They must be starved to it at first, but in a day or two they eat it freely, and afterward prefer it to the unfermented. They are fattened quicker and more economically by this process.

Editor's Table.

Reply to the Albany Cultivator.—In our August number, under the head of *The Improvement of Domestic Stock*, we had occasion to comment, solely for the welfare of the farmer, on parts of a *labored* article upon breeding, which appeared in the Albany Cultivator for July; and notwithstanding its highly mischievous tendency, we did so in a broad, national point of view, expressed in courteous language. What is its reply? It has not manliness enough to confess its errors and make atonement, as Judge Buel did on something of a similar occasion, and would again were he still living and conducting the paper; but, on the contrary, it strives to shift the main question from its shoulders, and answers by irrelevant matter and personalities, which is at once acknowledging its totally indefensible position, and the impossibility of maintaining it for a moment. One great consideration on the part of the public in supporting agricultural papers, is, that in these they get useful and entertaining information, totally divested of the concomitant scurrilities of a partisan press. The Cultivator is the first journal of the kind, within our knowledge, that has ever descended to an opposite course; and at this point we would leave it, were it not that the high standing it had attained under the lamented Buel, and a certain authority which continues to cling to it from reverence and respect to his memory, and the ability of some of its correspondents, make it necessary to offer a few words of reply to its *disingenuous* and *incorrect* statements.

The Cultivator says, "He," meaning ourselves, "has never to our *knowledge* bred any farm stock but pigs." If this be so, it has been greatly deceiving its readers in regard to us for several years past. But it had plenty of "*knowledge*" to the contrary, so far as hearsay evidence can go, and *it knows as well*, as it does anything, that we were interested in, and personally inspected the breeding of a fine herd of Short Horns, and Devons, each distinct, beside animals combining various crosses between the two, natives, and a few Ayrshires; also something of a stud of most excellent-blooded road-horses, and sheep of the Leicester, South-Down, and Merino breeds. In regard to the merits of Short-Horn cattle, particularly, we were early instructed by our friend; and will add, what we think very few others in the United States can say, that we have seen nearly all the animals imported into Massachusetts about the year 1817, and after, by the late Mr. Williams and others; most of those which have been imported into this state, from time to time, and those brought out from England at different periods by the Ohio and Kentucky companies, and their subsequent breeding as far west as Illinois, and south to Mississippi and Louisiana. Books on this subject have been long familiar to us; and in addition, we have had direct personal intercourse with many of the gentlemen practically engaged to a considerable extent in the breeding of stock of all kinds, in various parts of the Union. Now whether all this has qualified us somewhat to give an opinion upon stock-breeding, we shall leave to others to determine.

It is true, when in England, we saw but a "moiety" of the fine Short Horns; for it would require two full years steady travelling to accomplish the single object alone of seeing all bred there. But we saw at the various agricultural society shows, and elsewhere, more than a thousand head of Short Horns, which were said to be *samples* of pretty much all the best herds in Great Britain. Whether we could form any opinion of what we did not see, by those samples, the public may judge; but we suppose if the Cultivator were called upon to purchase a cargo of wine, instead of taking a sip from a pipe here and another there, it would feel compelled, in order to become a *proper judge* of its quality, to *drink the whole ship's load!* We should be glad now, in return, if the Cultivator would state *its experience* in breeding stock; but as it will undoubtedly prove very modest on this head, we shall probably hereafter give the public an inkling of its *superabundant practical* knowledge; for judging from its "5-points" recommendation of "improvement," it would be very great indeed.

The Cultivator does not seem to know, maugre its veteran editorial experience, that marking an article for attention is an act of courtesy; we wish all editors to do the same for us, otherwise, in the great number of exchange papers, and the labor of looking them over, the article might escape us.

The Cultivator intimates that our trip to England some two years since, was the *first* time we ever "smelt salt water." We can only say, that that was the fifth voyage we had made on the Atlantic. Our olfactory organs were initiated in the smell of salt water in early life, and the first time we visited Europe we resided there nearly two years. We felt about as much elated at having crossed the Atlantic on our last voyage, as the Cultivator probably would to traverse the Erie canal.

The "important man" is doubtless what the proprietor of the Cultivator fancies he himself would be, after "smelling salt water" for the first time, and getting rid of what the sailors professionally term "lubber legs." We have a frank, open way of expressing ourselves in all matters—a merit of which the Cultivator seems to have no idea; it therefore calls that "important" which is nothing more than a free, ingenuous expression of opinion. We should be very glad to know whose reading assisted the Cultivator to so humorous and "striking an illustration," as it is quite out of the latitude of its usual prosaics. Or has it fairly awoke from the Rip-Van-Winkle dullness, that has overshadowed it for so great a length of time, and absolutely returned to its haunts again at the quiet old Dutch village. May it find a second Judith Gardenier to watch over and protect it, and a resting-place like unto the renowned Union Hotel, kept by another Jonathan Doolittle, where the *less* the Cultivator *does*, especially in matters it does not understand, the better it will be for it.

The Cultivator "believes" that we went to England solely for the purchase of pigs. Very well; the value of swine annually bred in the United States, has been reckoned worth at least ninety to one hundred millions of dollars; and when it is acknowledged by the Cultivator itself, that we purchased and imported *first-rate ones*, and such as are likely to make a great improvement in the stock at home, we think we did the country some service in making this importation. The Cultivator knows, however, that we did not go to England for that purpose alone, but for procuring stock in general; and the reason why we brought home no Short Horns was stated some time since in the columns of the Cultivator itself, viz., that we could not then procure anything which we thought would improve the very superior herds already imported into the United States, and for fear of the malignant disease then so prevalent among horned stock in England. We assuredly think that we deserve some credit for abstaining from the risk of introducing such a plague among the animals of our country, when, if we had made an importation at that time, we could have done so at a certain and considerable profit.

Yet suppose we never had bred anything but pigs, is this a subject to be sneered at? We appeal particularly to the farmers in the great west on this matter, where, by the recent discovery of extracting oil from lard, and the opening of the ports of Great Britain to their products, the raising of swine will yet bring them untold wealth. Again, to the planters of the south, who, suffering under an unprecedented low price of their great staple product, with the characteristic energy of the American people, are manfully struggling in consequence of it to produce within themselves their own pork, and are seeking the best animals for this purpose. It strikes us that such a sneer comes from the Cultivator with a peculiar ill grace, when, had it not been for the particular solicitations of its proprietor, we should never have thought of appearing before the public as we did on this subject; and whether our articles added anything to the interest of its columns, or the improvement of the animals in question, we shall leave to others to determine. It has always been our motto, that a thing worth doing at all, *was worth doing well.*

We must confess our surprise at the unworthy attempt of the Cultivator to revive the slight misunderstandings that existed on the part of a very few persons, in consequence of our saying "there is but one man's herd there," meaning England, "that can improve our own," and "Ayrshires we can make here by the thousand, by crossing Durham bulls on our best native milkers." Since we returned to this city last December, we have been called upon and written to privately, by several of the persons who took umbrage at these expressions, acknowledging that they had misunderstood us—that they were in error, and wished the subject dropped in oblivion. We supposed, therefore, that anything further said on this subject was entirely unnecessary; but now that the Cultivator has revived it, we shall briefly explain the whole matter.

The junior editor and proprietor of the Cultivator solicited the communication of us on which it comments. It was written at Albany in great haste, when we were on our way from this city to Buffalo, and handed into his office with the request, that as we had not time to read it all over after writing, he would please do so, and make any little corrections required. He published it with avidity; and upon an inquiry, in a succeeding number, from a correspondent, as to one of the expressions in our communication, very justly explained it;[*] now he takes an entirely different stand, and draws conclusions from our words, which he knew, not only as above, but by a subsequent communication from us in his own columns, were *entirely unjust.*

No man of honor would ever pursue such a course. Had we solicited a communication, and then published, and thus explained it, we would have *stood by and defended it to the very last,* though the writer might afterward become our worst enemy. We consider the conduct of the proprietor of the Cultivator in this matter, as a *total breach of faith;* and is there a single correspondent on his list, that he may now be overwhelming with his flattery, whom, if he thought likely to cross his dollar-and-cent path, he would not instantly sacrifice if he could.

Before we knew that any one had taken the slightest exception to our remarks about Ayrshires, we gave an opinion regarding them more at length in a communication written very soon after that which appeared in the Cultivator, and addressed to the President of the Kentucky State Agricultural Society, upon being elected an honorary member thereof; the Secretary saying to us at the same time, that when the party was present, as we then were in Kentucky, something of the kind was expected. Here is what we refer to: "To those who wish for *something like* an Ayrshire already acclimated to our country, I recommend to purchase snug Short Horn bulls of a medium size, bred from milking families, and cross them on the best milkers at their hand, and from these make the most approved selections, and thus continue on," &c.

It is generally conceded by all good authorities in Scotland, that the Ayrshires were made there precisely as we assert that "something like them" can be produced in this country; that is, by a cross of the Durham bull, upon the native cows of that district. We do not say that the Cultivator asserts it, but we might infer with perfect justice, that it thinks American breeders can not do this in our own country with the same success that the Ayrshire breeders have in Scotland, viz., make a deep-milking breed of cows here, by crossing Durham bulls, from a milking family, on our best native milkers. If we can not, pray what are our Durham bulls and native cows good for? Are we to be kept in leading strings to the foreign breeder for ever? Some of the best milkers which we have ever seen in this country were thus made.

Count de Gourcy, in his Agricultural Tour in Great Britain, states, that Mr. Smith of Deanstone, one of the most eminent farmers and breeders in Scotland, has crossed his Ayrshire cows with Durham bulls, and that this cross-breed proves *better* milkers than their dams—the pure Ayrshires. Several Scotch gentlemen, whom we met in England, gave us the same information. No one thinks higher of the Ayrshires than we do; and we are ready to give them every iota of credit which is their due; and all we wish is, that every breeder of them in this country could see these remarks. In justice to us, we think the Cultivator is bound to copy them word for word, that its readers may know exactly what we mean.

When we asserted that there was but one man's herd in England that could improve our own, instead of a detraction, as the Cultivator would make it out, we meant the expression as the highest possible compliment which we could pay to the fine animals already imported and bred here; for we immediately added (see Cultivator, Vol. VIII., p. 180), "and throwing TWO or THREE stocks out there, New York, Ohio, and Kentucky, alone, might show successfully against all England." In the name of common sense, who could ask for higher praise of their stock than these expressions convey? That "one man's herd" alluded to, was the Duchess tribe of Mr. Bates of Kirkleavington. From every other strain of Short-Horn blood, of any value in England, we had been importing the very best for twenty-five years. Nothing yet of this pure blood had been sent out to America, and hence the necessity, if further importations were to be made, that they should be from something as *distinct* as possible, of the same breed, for a *fresh* cross. The superior merits and the antiquity of this Duchess blood, few in England are disposed to deny.

To show our faith in our assertions, we make the following proposition to the Cultivator. Setting aside Mr. Bates's blood, wherever it may be found in England, and the "two or three" other stocks we had in view, for every animal that its editors will import, superior to such as we will select here to match them, we will engage to forfeit the same for its benefit, provided, that in case its animals so imported do not prove superior to those we show against them, they shall forfeit the same to us. We are ready to name an umpire any time to decide this question, the Cultivator naming another; and if the two can not agree, they shall call in a third. We shall expect an immediate acceptance of this proposition, or that the Cultivator retracts the false inferences which it has drawn from our language.

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[*] Here is the explanation of the Cultivator, Vol. 8th, p. 188. "Perhaps, however, Mr. Allen did not intend to assert that the cross proposed by him would give positive Ayrshires, but only a breed possessing all their essential and most valuable qualities. We have ourselves little doubt, since the evidence meets us at every turn wherever the improved Short Horns have been introduced, that the cross proposed by Mr. Allen, of Short Horn bulls with the best native cows, would give a breed possessing in a great degree the qualities of good milkers, hardihood in keeping, and aptitude to fatten, although it might be improper to term them Ayrshires."

The Cultivator denies having calumniated the Short Horns, and accuses us of "knowingly and wilfully misrepresenting it." Here are its very words, and what we take for calumnious expressions, we have marked in italics.

> "In regard to the qualities of the imported animals from which we expect improvement to our herds, it appears to us that there are two points that have been sometimes overlooked in making our selections. We have not paid attention enough to their *milking properties*, or their *ability and aptitude to labor*. The old Short Horns were the best milking breed in England—a *reputation which, as a whole certainly does not belong to the improved breeds*. That there are some superior milkers among them is notorious; and that milking deep might be made one of the peculiar characteristics of the breed, no well-informed breeder doubts. We very much question, however, whether there is at this time in Europe or in the United States, a herd of *any* improved stock, SHORT HORNS, HEREFORDS, or DEVONS, from which twenty-five cows can be selected, that would produce as much butter and cheese as the twenty-five native cows mentioned at page 79 of the May Cultivator, or that from the twelve native cows mentioned at page 85 of the same number. The reason is a plain one; *other qualities* than DEEP MILKING have been principally regarded by their breeders; *beef*, and not *milk*, has been the great object. That deep milking can easily be bred into them, no one questions; and this we believe is one of the points that calls for immediate attention. Another point that has not been sufficiently attended to, is *aptitude to labor*.."

Now we assert, that the well-bred Short Horns of the present day are *generally good milkers*, and that many of them are *very superior* in this point; not only giving a *large quantity*, but also a *good quality* of milk. The Cultivator asserts that the reputation of being *good milkers* does not belong to them; for *other qualities* than *deep milking* have been *principally regarded* by their breeders; *beef*, and not *milk*, has been the *great object*. It also infers that they have little *aptitude to labor*. We shall show its mistake on this point, as well as others hereafter.

The standard dictionaries define the word calumniate, "to charge falsely; to propagate evil reports." Now if the Cultivator has not charged falsely, and propagated evil reports against the Short Horns, then we know not the meaning of the word *calumniate;* and we shall see whether the gentlemen with whose names it makes so free a parade, will sanction either its assertions, that their high-bred animals are not deep milkers, or that they can be improved on its "five-points" principles.

In losing so much of its former influence, and so many of its subscribers, the Cultivator seems to have lost its temper. We are really sorry, especially since in its last number it has set itself up as the *agricultural Chesterfield* of the age. Perhaps, however, as we are a mere junior in editorship, we can not account the loss of temper, and getting into a passion, as one of the points of *good breeding;* still, after sufficiently witnessing its own example, and that of its *courteous* assisting band of anonymous lampooners, there is no longer a doubt that if *disposed* we can improve apace. Whether we shall attempt to do so, however, remains quite another question.

One more word and we have done. The Cultivator has seen fit to silently imitate many things from the American Agriculturist to its advantage; we hope, however, for its further interest, that it will forbear another imitation that we have understood it had in contemplation, and continue its present size and form, for this is about all that is now left to remind its faithful supporters of the eminent man who first established it.

THE AMERICAN POULTRY BOOK; being a Practical Treatise on the Management of Domestic Poultry, by Micajah R. Cock. Harper & Brothers, 82 Cliff st.; 179 pages, 18mo., illustrated with a few wood cuts—price 38 cents. We have not had time to read this little work through; but judging from the few pages we have glanced over, we think well of it, so far as it goes. The value of poultry in the United States, as estimated in the last census, is over twelve millions of dollars; the best method, therefore, of raising it, is of no small consequence to those engaged in the business. The natural history; different breeds of fowls; fowl-house; the egg; raising chickens; caponization; diseases, &c., &c., are all touched upon.

MANURES; a Prize Essay, by Dr. Samuel L. Dana, for which the first premium of the Massachusetts Society of Agriculture was obtained. We have barely time to announce the receipt of the above work, an octavo pamphlet of 48 pages. We shall very soon give it a perusal, and in the meanwhile can say to our readers in advance, that anything on the subject of manures, from the pen of Dr. Dana, will be found worthy of their attention; for he is undoubtedly the best writer that we have on these subjects.

PRINCE'S DESCRIPTIVE CATALOGUE for 1843 & 1844, of the Fruit Trees, Ornamental Trees, Shrubbery, and Plants, cultivated and for sale at the Linnæan Botanic Garden and Nurseries, Flushing, near New York. We have personally inspected the grounds of Messrs. Prince & Co., at Flushing, and found many rare things there, and such as can scarcely be found elsewhere in the United States.

ENCYCLOPEDIA OF GEOGRAPHY. Parts 15 and 16, by Prof. Murray, are received from Wiley & Putnam, 161 Broadway, price 25 cents, each part.

JOHNSON'S ENCYCLOPEDIA OF AGRICULTURE, republished by Carey & Hart of Philadelphia. Part 14 is out. The last article is "Plantation."

THE WESTERN FARMER AND GARDENER, AND HORTICULTURAL MAGAZINE, Cincinnati, Ohio; published by R. P. Brooks, 24 pages, double columns, monthly, octavo—price one dollar. Edited and illustrated by Chas. Foster. No 1 of Vol. 4 of this excellent work is at hand. The illustrations are quite superior, being a colored plate of the clematis grandiflora, and devera geranium; a copper plate of a fine Short Horn cow (the original of which we well recollect), of J. E. Letton of Kentucky, and a strawberry from Mr. Mottier of Cincinnati, whose superior garden we have frequently visited.

TO CORRESPONDENTS.—P. is unluckily mislaid, which must be our apology for not giving him place this month. We trust that he will turn up in time for our next. W. H. Sotham's communications shall be inserted in October No.; also D. S. Stebbins, John Lewis, and A. R. D.

A Squatter will be answered soon.

Mr. Bayard is informed, that the different breeds of sheep can be had in England, from 5 up to 100 guineas each, according to breed and quality. The risk of importation is great; and the expense to New Orleans would not be less than $15 to $20 each. There are breeders in this vicinity who have just as good South Downs, Cotswolds, and Leicesters, as can be imported; and they will sell them for *one fifth* the price at which they can be obtained from England. We speak from experience in this thing.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, SEPTEMBER 25, 1843.

ASHES, Pots,	per 100 lbs.	$4 50	to	$4 62
Pearls,	do.	5 44	"	5 50
BACON SIDES, Smoked,	per lb.	4½	"	5½
In pickle	do.	5	"	5½
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	22 00	"	24 00
BARLEY	per bush.	55	"	56
BEANS, White	do.	1 12½	"	1 25
BEEF, Mess	per bbl.	6 50	"	7 50
Prime	do.	5 00	"	5 50
Smoked	per lb.	7	"	7½
Rounds, in pickle	do.	4½	"	5½
BEESWAX, Am. Yellow	do.	28	"	30
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	12	"	15
Shipping	do.	6	"	10
CANDLES, Mould, Tallow	do.	9	"	12½
Sperm	do.	28	"	35
Stearic	do.	19	"	24
CHEESE	do.	4	"	7
CIDER BRANDY, Eastern	per gal.	35	"	40
Western	do.	28	"	35
CLOVER SEED	per lb.	7	"	8
COAL, Anthracite	2000 lbs.	4 75	"	5 50
Sidney and Pictou	per chal.	6 00	"	6 25
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	54	"	56
Southern	do.	53	"	55
COTTON	per lb.	6½	"	11
COTTON BAGGING, Amer. hemp	per yard.	16	"	18
American Flax	do.	15	"	16
FEATHERS	per lb.	25	"	32
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	9 75	"	10 00
clean	do.	— —	"	— —
FLOUR, Northern and Western	per bbl.	4 25	"	4 75
Fancy	do.	5 50	"	5 62½
Southern	per bbl.	4 25	"	4 75
Richmond City Mills	do.	6 00	"	— —
Rye	do.	2 62½	"	3 00
HAMS, Smoked	per lb.	5½	"	7½
Pickled	do.	4	"	5½
HAY	per 100 lbs.	45	"	50
HIDES, Dry Southern	per lb.	10	"	11
HEMP, Russia, clean	per ton.	165 00	"	190 00
—— American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	11	"	15
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	8
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 81	"	3 00
Corn	per hhd.	13 00	"	13 50
MOLASSES, New Orleans	per gal.	28	"	31
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	26	"	28
Southern	do.	23	"	25
OIL, Linseed, American	per gal.	80	"	85
Castor	do.	80	"	90
Lard	do.	60	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 12½	"	1 37
PLASTER OF PARIS	per ton.	1 88	"	2 25
Ground, in bbls	per cwt.	50	"	— —
PORK, Mess	per bbl.	10 00	"	11 00
Prime	do.	9 00	"	10 00
RICE	per 100 lbs.	2 75	"	3 00
ROSIN	per bbl.	65	"	1 00
RYE	per bush.	66	"	67½
SALT	per sack	1 40	"	1 50
SHOULDERS, Smoked	per lb.	3½	"	4½
Pickled	do.	3	"	3½
SPIRITS TURPENTINE, Southern	per gal.	38	"	40
SUGAR, New Orleans	per lb.	6½	"	7½
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	7	"	7½
TAR	per bbl.	1 50	"	1 75
TIMOTHY SEED	per 7 bush.	14 00	"	16 00
TOBACCO	per lb.	3	"	7
TURPENTINE	per bbl.	2 12	"	2 50
WHEAT, Western	per bush.	95	"	97
Southern	do.	85	"	90
WHISKEY, American	per gal.	22	"	25
WOOL, Saxony	per lb.	35	"	50
Merino	do.	30	"	35
Half-blood	do.	25	"	27
Common	do.	18	"	22

New York Cattle Market—September 25.

At market, 1000 beef Cattle, (350 southern,) 30 Cows and Calves, and 3,300 Sheep and Lambs.

PRICES.—*Beef Cattle* have not revived from last week, and we quote to correspond, viz: 4 to 5 62½. with sales of extra a little better; 35 taken to Bermuda, and 300 unsold.

Cows and Calves.—All sold at $15 *a* $23.

Sheep and Lambs.—All taken at $1 *a* 1 75 to $2, and Lambs $1 50 *a* $3 for Sheep.

REMARKS. *Ashes*, the stock on hand is light, and a good demand exists for them. *Cotton*, the late rise in Europe has had a corresponding effect upon this market, and an advance has taken place of ½ a cent per lb. within the past month, and a large business been done here in it. It seems to be well established now, that the crop will be much short of that of last year; it is still uncertain yet to what amount. Notwithstanding the large stock on hand in Europe of a trifle over a million of bales, there is no doubt that the present prices will be fully maintained the coming year. Export from the United States since 1st September last, 2,888 bales; same time last year, 5,065; same time year before, 6,704. *Flour* and *Grain*. The promising harvest in England has had the effect of lowering prices in this market, and for the present they are dull of sale. Unless the weather should change abroad and become very bad, a thing hardly to be expected, we must look for rather low rates in these products. *Hemp*, the stock of American on hand is light, and as the crop proves a short one at the west this season, we may look for an advance. *Lead* is firm, with an upward tendency. *Molasses* and *Sugar* are dull, and have a downward look. *Naval Stores* in good demand. *Lard* is active. *Provisions* generally quiet, and moderate stocks on hand. *Rice* is not quite so firm. *Seeds* very dull. *Tobacco*, the finer qualities in good demand. *Wool*, there is less activity than last month, though prices are fully maintained.

Stocks continue to rise, and much confidence seems at length to be established in them.

Money continues abundant at 3 to 4 per cent. on good paper, and 6 to 7 per cent. on bond and mortgage.

Crops. With the exception of slight frosts in the northern parts of the country for a few nights, the weather has been unusually hot the past month. This has given the corn time to fully ripen. The crop will be a good one, as well as that of roots; and the promise of abundant and late fall feed, makes the season thus far, with the exception for cotton, a favorable one.

Business generally continues good, and all departments are fairly employed.

BLACK GALLOWAY CATTLE.

A pure-bred imported cow, and a bull of the Galloway or Kyloe breed of Scotch Highland cattle, are for sale in this vicinity. These animals are very fine of their kind, and were chosen from one of the most celebrated breeders of this stock in Scotland. The cow took several prizes at the agricultural shows before being shipped to this country, and gives a superior quality of milk. The bull is quite equal to the cow, and they will be sold at a reasonable price.

Apply, post paid, to the Editor of this paper.

A STOCK MAN WANTED TO GO SOUTH.

A planter, in the state of Georgia, wishes to engage a faithful competent man to take charge of his stock. If he be married, and his wife be a good dairywoman, she will also find employment. The situation is in the interior of the country, and *quite healthy*. None need apply if above middle age, or who have not had some experience in their business in this country, and can bring the best of references.

Address the Editor of this paper.

SOUTH-DOWN SHEEP FOR SALE.

Having, with my son, concluded to visit England, and perhaps France and Germany, with a view of becoming, by personal observation, better acquainted with the great agricultural improvements of the day, as well as more especially to examine our own favorite departments of Stock, Stock-breeding, and Stock-growing, we have concluded to dispose of the principal part of our South-Down flock, consisting of ewes, lambs, and bucks—all of which are bred exclusively from the Glynde and Babraham flocks of John Ellman, Esq., and Jonas Webb, Esq., in England. More than this need not be said for their purity of blood, and excellence of descent.

The flock is in the most perfect health, and we think it will be conceded, when seen, that the produce is in no way inferior to the imported sheep; but it was advisable to sell them, that the farm should not become overstocked during our absence.

Mr. Thomas Hollis of Gilbertsville, Butternuts, will take charge, and make sale of the sheep, on the ground selected for the Agricultural Exhibition of the American Institute, to be held in New York on the 18th and 19th of October, when the flock will be exhibited, and sold without reserve.

FRANCIS ROTCH.

Butternuts, Otsego co. N. Y., Sept. 12th, 1843.

SOUTH-DOWN AND LONG-WOOLLED SHEEP FOR SALE.

Will be sold at Auction on Thursday the 23d of October next, at 11 o'clock A. M., at Coldenham, 8½ miles west of Newburgh, about 70 head of South-Down Sheep, consisting of Bucks, Ewes, and Lambs. They are all bred from stock selected from the most celebrated flocks in Sussex, England, and imported by the subscribers.

Also 30 head of choice Long-Woolled Sheep, several of them imported. S. & J. WAIT.

Coldenham, August 24, 1843. 2t

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Saxton & Miles, Publishers, and dealers in Books in every department of Literature, at very reduced prices for *cash*.

S. & M. publish the following Book, which should be in every family in the United States: GUNN'S DOMESTIC MEDICINE, or the Poor Man's Friend.

Among the many publications of more than doubtful utility, with which our presses groan, it is pleasant to offer to the public one which, while it can not injure the mental and moral powers, is capable of improving our health and prolonging our days. It is now about ten years since this work was first published, since which time it has passed through many large editions, and the astonishing number of *one hundred thousand* copies has been sold in the southern and western states, and the demand is increasing.

It has just been revised and corrected, containing 900 pages, and executed in superior style. People may be disposed to smile when we tell them that they can save money by purchasing this book, but we think we can satisfy them that such is the fact. In every family more or less is paid yearly for doctor's bills. A child is taken with a fever, or some other complaint, and from ignorance nothing is or can be done effectually to check it. The physician is called, and a large bill is contracted; whereas, had GUNN'S DOMESTIC MEDICINE been on hand, a remedy could easily have been found which would have checked the disease in its first stage, and not only have saved the purse, but perhaps the life.

AGRICULTURAL INSTITUTE,

BRIDGEPORT, CONNECTICUT.

The Rev. B. G. Noble proposes to establish an Agricultural Institute, on his Farm in the town of Bridgeport, Connecticut. The Location is on the east bank of the harbor, within a few minutes walk of the churches, surrounded by agreeable rural scenery.

The full course of instruction will embrace the natural sciences, with their application to agriculture, and all the branches of a finished English education.

The winter term will commence on the first Wednesday of October, and the summer term on the first Wednesday of May. The spring and autumn vacations will be each four weeks.

EXPENSES. For Board, Tuition, Washing, and Fuel, will be for each term of twenty-two weeks, $80.

Payment to be made for each term in advance.

The pupil should be provided bed and bedding. Application to be made to the Rev. B. G. Noble, Bridgeport, Connecticut, or to the Editor of the American Agriculturist. 2t

FARM TO LET.

Wanted to let on shares a Farm of 480 acres, 80 of which are well fenced and under good cultivation. It is well stocked with horned cattle and horses, and has a good supply of farming utensils, a two-story frame house, and large barn. The land is of the best quality, and well watered by two never-failing streams. It lies in a perfectly healthy region, on a high rolling prairie, 18 miles from Springfield, the capital of the State, and 35 miles from Pekin, on the river Illinois. The person making application for it must be a man of family, possess some capital, and give satisfactory reference as to character.

Apply *post paid* to the Editor of this paper, 205 Broadway, New York. 1t

Prince's Descriptive Catalogue of the Linnæan Botanic Garden and Nurseries at Flushing.

This extensive publication is now in press, and will be speedily issued, and sent to every *post-paid* applicant. It comprises ample descriptions of all the estimable varieties of Fruit Trees cultivated in the Nurseries of the Establishment, also a list of the *bad and inferior* varieties of every class that have been rejected during the long period of investigation, more than 200 of which are still unwittingly cultivated in various collections. The Catalogue may be obtained *gratis* at 70 Nassau street, and orders for Trees, &c., per mail, will receive prompt attention.

WM. PRINCE & Co.

Flushing, Aug. 26, 1843. 2t

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Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

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Superior cows and great milkers, of the Ayrshire and Yorkshire stock, recently imported from Scotland and England, can be had on reasonable terms. They are in the vicinity of this city, and can be seen any time, upon a few hours' notice.

Apply, post paid, to the Editor of this paper.

American Agriculturist Almanac for 1844.

This work comprises 64 pages, double columns octavo, with numerous wood cuts, price $8 per hundred, 12½ cents each. In the contents will be found—Agricultural Statistics of the United States—Aspects and Nodes—Astronomical Calendars for Montreal, Boston, New York, Philadelphia, Charleston, and New Orleans—Characters and Names of the Planets, &c.—Farmers' Northern Calendars, with particular directions for the management of the Farm, Cattle, Fruit and Flower Garden, &c.—Southern Calendars for the Planter and Farmer, with explicit directions for the culture and harvesting of Cotton, Rice, Tobacco, &c., &c.

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. II. NEW YORK, OCTOBER 16, 1843. NO. VIII.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

MAPLE SUGAR.

We have received from Mr. Joel Woodworth, of Watertown, a sample of his maple sugar, which received the first premium at the State Agricultural Show, lately held at Rochester. It is in a crushed state, white as crystal, and scarcely inferior in taste to the better qualities of refined loaf sugar. We think that Mr. Woodworth deserves high praise for manufacturing so superior an article. If a little more attention was paid to the production of maple sugar, it would, we are confident, be highly beneficial to the farmer, and greatly increase the wealth of the country.

In 1840, the state of Vermont produced only 5,500,000 lbs.; last year we understand its product was 20,000,000 lbs., which, valued at 5 cents per pound, would amount to the large sum of $1,000,000. In our own state, with something of an increased attention to this important article, we are confident that we could easily produce double the quantity made in Vermont. Every farm should have its sugar orchard. A maple-tree will grow well where almost any forest-tree will flourish. It is one of the most beautiful trees of North America, and is valuable alike for wood and timber. Now is the proper season to set them out, and many a road-side and lane, and pasture, and waste place on the farm, may be beautified and turned to a profitable account by a row or clump of maples. We trust that those who are engaged in clearing lands the present winter, will have some regard to the reservation of the maple-trees. They can easily be preserved from the high winds and the scorching rays of the sun, by allowing them to stand in small masses, or leaving a clump of other trees around them for protection.

SCARCITY OF SWINE, AND THEIR PRICES.

We understand from drovers who have been out to the west for the purpose of making their annual purchases, that swine have become comparatively scarce, and high priced. We anticipated this eighteen months ago when at the west. Pork had fallen to so low a price, that an unusual number of farmers stopped breeding pigs, and others continued the business to a very limited extent. We forewarned our friends in regard to so injudicious a course, and now they will begin to see the effects of it. Whole hogs, fresh killed, are now selling readily in this market from 6 to 6½ cents per pound; and pork in barrels is worth 70 to 80 per cent. more than it was last year at this time. What the price of swine will be at the west this season we are unable to say, as the time of killing has scarcely commenced; we apprehend, however, it will be considerable higher than last year.

In consequence of the late low price of pork, many breeders we understand have killed off their choice stocks. This is a very injudicious course, and highly to be regretted. What has cost them dear should be carefully kept and bred, even more so when prices rule low than high; for then is the time that improvements can be made at a cheap rate. Our country has paid pretty generously for improved stocks of different kinds, and we really hope that unceasing pains will be taken to perpetuate and spread them. There is no excuse now for the farmer who has hitherto held aloof from purchasing improved stock on account of what he considered high prices; these are at present moderate enough in all conscience, but they will not continue so much longer. An increased demand for improved animals has already commenced; and we venture to predict, that those who take good care of their stock, and are choice in its breeding, will a year hence be able to make sales at considerable higher prices than rule at present, and in much greater numbers. Shrewd breeders already have an eye to this anticipated change in the times, and are not only improving, but increasing their stocks as rapidly as possible.

MEDITERRANEAN WHEAT.

Many farmers have tried the above wheat, and give it a decided preference over any other variety, on account of its proof against the Hessian fly and rust. They claim for it a hardier constitution, more thrifty growth, and much more vigorous roots, in consequence of which, it resists the attack of the fly in the fall, by which almost any other species of wheat is more or less injured, and sometimes totally destroyed; and so much forwardness in the plant in the spring before the fly appears, as to be beyond any injury from its attack. Added to this, is its early maturity, by which it entirely escapes rust. These are certainly great considerations in its favor, and if they prove true in most cases, will insure its extensive introduction through the United States.

But it is certain that its long, stiff beard, and thick, dark-colored bran, make it but an indifferent wheat when matured, and those who are cultivating the choicest kinds without material injury from the fly and rust, will do well to be cautious in substituting it for such as are most approved. In this latter conclusion, we know that several of the planters who have tried it in Virginia, do not agree with us. But have they ever taken a quantity of the White Flint, or some other choice flouring varieties, and ground 100 bushels or so of each, to ascertain which yields the most and best flour? Nothing short of such an experiment should decide this question.

DISEASES OF SHEEP.

Thousands of sheep have been taken the past season from the north and east, to the prairies of the west; and the difference in climate, soil, food, and the hardships of extra exposure, have made them somewhat liable to disease. We have been requested to give remedies for these diseases, such as are not usually found in books. We must confess our inability at once to do so, not having any experience in the diseases incidental to sheep upon the prairies. We presume, however, many of our readers have had the necessary experience, and we shall feel quite obliged to them for any communications they may favor us with on this important subject.

In the little practice which we have had in sheep husbandry at the west, we have found that sheep have become diseased, more from being placed on wet, low lands, or those of a heavy clay soil, than from any other cause. The remedy in this case all understand, which is a removal to dryer ground. Diseases frequently occur from want of salt and tar, especially in the interior of the country, where these articles are of a high price. We once had a flock of sheep that became badly diseased, and were rapidly dying. We restored them to perfect health in three weeks by the following simple proceedings.

At the time they became affected, they were running on lands of a heavy clay soil, the hollows of which had more or less standing water in them. We first removed the flock to pastures which had been partially drained, and were tolerably dry. We then placed a sufficient number of troughs in the pasture for the accommodation of the sheep, covering the bottom of them at least half an inch deep with tar. To this we added sufficient salt to come above the tar, then scattered over it to every peck of salt, a mixture of one pound of sulphur, a quarter of a pound of alum, and one ounce of saltpetre well pulverized. The sheep did not seem to relish this mixture at first with their salt, but they soon became accustomed to it, and in a week ate it quite as freely as the salt alone. We believe if sheep were constantly supplied with something of a like mixture, and kept off from wet lands, that this would prove a very general preventive of disease. We were recently informed by Mr. Edward Wait, an experienced farmer in Orange county, that he had repeatedly cured the scab in sheep, by simply placing flour of sulphur mixed with salt in troughs where they could come and eat it at their pleasure. The foot-rot is often cured by keeping the hoofs well pared, and driving the sheep every day for a short time over a barn floor plentifully sprinkled with unslacked lime. Lime spread upon the ground will answer the same purpose. It would be necessary to place it in a narrow place; a lane for example, or between the gate-way, and then drive the sheep through; it might also be scattered with good effect round the salt troughs. Pine woods and browse are very healthy for sheep. See Vol. I., page 356 of this periodical. But a dry soil, plenty of salt and tar at all times, and a little sulphur occasionally, may be termed the grand panacea.

THE YAK.—(Fig. 52.)

The yak is classed by naturalists with the bison, and has some resemblance to the buffalo. It is a native of central Asia, and among the Himalaya mountains its size is small, being about 3½ feet in height. In fertile pastures it attains, like the ox, a large size. It is domesticated and used somewhat for agricultural purposes in India. It is covered with long hair of a fine texture, and is particularly curious for its tail, which is taken and beautifully died, and used as an insignia of rank among the Bashaws of the Turkish empire.

NEW HAVEN COUNTY AGRICULTURAL SHOW AND FAIR.

This celebrated Show came off at New Haven on the 27th and 28th of September, and as we like to be beforehand in affairs like this, we accepted the kind invitation of our friend, Mr. Henry Whitney, and left this city early on the morning of the 26th, that we might have a view of the ground in advance. A few hours of a delightful sail in the good steamboat New York, along the enchanting shores of the East river, and the hills of Connecticut, soon brought us in view of the rocky peaks of Mount Carmel; anon rose over the beautiful bay of New Haven, the East and West Rocks, with their frowning perpendicular cliffs, a detached peak of the former rising like a huge dome in the distance, crowned with a balustrade of lofty forest trees. On our arrival we found all things ready for the coming day; and after having glanced over the preparations, and taken a general view of the town, we found ourselves domiciled at the elegant residence of Mr. Whitney.

The stock was somewhat tardy in making its appearance on the 27th; the first object of our attention, therefore, was the horticultural exhibition. This was got up at the statehouse, and we must confess as we entered the vestibule of this noble building, that the coup d'œil of fruits and flowers, evergreen arches, and wreaths, around the pillars, along the great hall, over the doorways of the different side-rooms, and up the stairway, was beautiful in the extreme. We had heard much of the richness, variety, and elegance of the Horticultural Shows at New Haven, but were really not prepared for the tasteful scene that presented itself before us. There is, however, a why and wherefore for all things—the ladies were the managers of this department of the exhibition, and hence it was like unto themselves—charming indeed.

Midway in the hall is a circular recess, and this we found walled up with a large bank of flowers in all the beauty and variety of the season. On one side of this was a huge Neptune's drinking-cup, (*spongia vasculum*,) sustaining a rich bouquet very tastefully arranged, from the garden of Mrs. E. Whitney, and which, we were happy to hear, took the first premium; beside this were others which we greatly admired, of various shapes and forms, from Mrs. Thompson, Mrs. Munson, Mrs. Sheffield, Mrs. Nicoll, Mrs. Skinner, Mrs. Deveraux, Mrs. Jarman, Mrs. Hillhouse, Mrs. H. Whitney, Mrs. Chester, Mrs. Voorhees, and the Misses Beach, Mansfield, Day, and others; then there were gentlemen whose names we think it would be ungallant to mention as competitors with the ladies. Mr. Peck showed a superb Turk's-head Cactus in full flower. It was two feet nine inches in circumference, and made a singular and showy appearance.

The fruits we thought quite fine, especially the pears, which were pronounced by gentlemen recently from the Boston Horticultural Show, as superior to any they saw there. One of them measured twelve inches in circumference. We are confident that it would be difficult to outshow these New Haven specimens. The peaches also were superb; several measured over ten inches, and weighed nearly nine ounces each. Apples we noticed fourteen inches in circumference, and weighing sixteen ounces, and as much farther north as New Haven is to this city, the grapes would do credit to New York.

The vegetables were an excellent show. We were especially pleased with some new seedling potatoes, and we found among other superb productions, two Royal Mammoth pumpkins from the garden of Mrs. Hillhouse, one weighing 112, and the other 120 pounds!

The show in dairy products, and domestic manufactures in the upper hall was rather meager. Some fine cutlery was exhibited, and other manufactures, which hardly come within the range of an agricultural paper to note. We were highly interested by a collection of insects exhibited by Judge Darling, the celebrated writer on this subject. We understand that his daughters made the arrangement of them, which certainly does those young ladies great credit. Mr. G. F. Read exhibited a handsome centre table and pagoda of shell-work, which he had made during the past year in hours of ill health. The shells were tastefully arranged, and these works of art would be handsome ornaments to any gentleman's parlor. But what with fruits and flowers, and bright eyes to watch over them, we found the interior of the statehouse a *dangerous* place to remain in, and upon announcement, therefore, of the trains of working-oxen coming up, we closed the door of this Paradise behind, and walked on to the green to view the cattle.

The teams marched in long trains of from 60 to 150 yoke each, drawing large carts festooned with evergreens, and filled with farm products, over which waved flags with appropriate mottoes, the whole line moving along in a seemingly never-ending length, to the strains of inspiring music from various bands. After all had arrived, they were paraded in double lines on the green, and numbered over one thousand head. The cattle were generally of a deep, rich red color, the favorite one of New England, and were otherwise quite Devon-like in their appearance, and certainly the finest and most numerous herd by far of working-oxen that we ever saw assembled together. Their performance on this day consisted in taking a load of 6,000 pounds along the street some 20 rods, and then returning to the place whence they started. The oxen were of medium size, with fine blood-like limbs, and showed astonishing muscular power in the performance of their task. They would start the load at a full gallop, trot, or walk, as called upon by their drivers. Some of these oxen attached to the cart were only four years old, and yet any one pair of them would draw and wheel round with this great weight with apparent ease. Their training was admirable, and they moved at the word of command like well-drilled soldiers.

Of other stock there was a meager show, save in the fine herds of Durhams of Messrs. Whitney and Townsend. These were not entered for prizes, but brought on to the ground that the people might be gratified with the sight of a few improved cattle. Some pretty good native bulls and cows of a deep red were exhibited, also a few noble fat cattle. Except a half dozen or so, fine-woolled sheep, and an equal number of swine, the animals in these classes were pretty poorly represented. We saw a neat gray stallion, 15½ hands high, a reasonable fine horse, muscular and active and said to be half Morgan; but we hear so much of this breed now-a-days, and find it so different from those animals which we well recollect some fifteen years ago, that we are rather suspicious that the name is often assumed as a cloak, to show off an indifferent article for one of a superior reputation.

The plowing-match took place on the 28th, and was a spirited affair. The teams were principally oxen, all single yokes, and were directed by the plowmen themselves. The task was one eighth of an acre, the soil a light, sandy loam. The ground was well plowed in 17 to 18 minutes, and the cattle seemed about as fresh after completing it as when they first began. The first prize of $6 was taken by Mr. Dickerman; the second, $4, by Mr. Alling; and the third, $3, by Mr. Benham. Mr. Alling's yoke of cattle we thought the finest on the ground, though his plow was a regular patched up affair. But he did his work in admirable style. Mr. Dickerman's team are old stagers, and have repeatedly won the first prize. The nigh ox is a singular beast, much like the Spanish cattle at the south, and possesses the same ram-like crook of horn. But if *odd* to look at, he is *even* to go, and it must be a smart one to beat him.

We would be glad to make one suggestion to the New Haven Agricultural Society, and that is, we desire to see them procure a choice Devon bull another year, and allow him to stand gratis among the farmers in the country. Their present race of cattle partakes strongly of Devon blood and Devon characteristics, and these *should not be changed* on their light soils. They may be improved in appearance by pure Devon bulls, and this is all that can be asked. The farmer should aim to breed every animal as near alike as possible; with the same distinctive characteristics—the orange-colored nose, the yellow rim round the eyes, the mahogany red, the clean sinewy limbs, and the slender up-turned horns. Many of the New Haven cattle come so now; but what they ought to strive for is, that all should be thus bred; then there will always be beauty, truth, and harmony, in their appearance.

The arrangements of the whole show were admirable; and mounted on high-spirited horses, Mr. Bishop (the marshal on the occasion,) and his aids kept everything in apple-pie order. The show was held on the green in front of the churches, beneath the noble spreading arches of rows of elms. The address was by the Hon. Henry Meigs of New York, and was listened to with profound interest. The dinner was merely a lunch, of capital corn beef, boiled, with plenty of bread, pickles, and water. The tables were open during the day to the members of the society, the farmers' sons, and all persons attached. In this way a large number of persons were well provided for at a cheap rate—an example well worth following, and far better in our judgment than a set dinner.

We were highly gratified by this farmers' festival, and we hope to see many more such. The weather was fine throughout the two days of the show, and nearly 8,000 persons must have been present on the occasion. It was a long time since we had visited New Haven, and we found it grown quite out of our recollection. It is a beautiful town, situated on a charming bay, and surrounded with many tasteful country residences. The avenues of elms are of great length, and very noble in their appearance, reminding us of those we saw at Strathfieldsay, one of the seats of the Duke of Wellington.

Our ancestors undoubtedly owe the florid Gothic arches to some such scene as this; for nothing can be more like between nature and art. In gazing up these splendid avenues of grand over-arching forest verdure, how strikingly true the lines of the poet.

"The pillared arches overhead,
Were the linden, and oak, and elm, wide spread;
The keystone that locked each ribbed aisle,
A fleur-de-leys, or a quatre feuille;
By wizard's spell, in days that are gone,
From flower and tree all changed to stone."

We visited some highly-cultivated farms in the vicinity of New Haven, an account of which we shall give at a future time. Particular objects also relative to the Show and Fair will be adverted to hereafter, as we have not space for them at present. We were highly delighted with our trip to this celebrated seat of learning, and shall treasure up in grateful recollection the kindness and hospitality that was extended to us upon the occasion.

SILK CONVENTION.

We are happy to inform our readers, that the Convention of Silk Growers and Manufacturers was held in this city according to appointment, and continued two days. It was well attended by delegates from all parts of the Union, and much valuable information has been elicited, showing not only that this highly important branch of industry can be easily established among us, but also that fair profits may be realized from pursuing it. In addition to the important verbal information communicated at this convention, upward of one hundred letters were received, giving the personal experience of the writers in growing and manufacturing silk. All this information will be embodied in a report, and soon published. We had no idea of the amount of cocoons made at the west. The superiority of open feeding we think is triumphantly established by the communications of this convention.

SHOW AND FAIR OF THE N. Y. S. AG. SOCIETY FOR 1843.

In our last we copied the list of prizes awarded at the late Show at Rochester of the N. Y. S. Ag. Soc., from the report in the first edition of the Rochester Democrat. This we have since found so imperfect and erroneous, that we now give a complete list of prizes, together with the reports of the different Committees. We copy from the New Genesee Farmer.

PREMIUMS ON CATTLE.

Class I.—Bulls.

Three years old and over.

For the best, to Lewis F. Allen, of Black Rock, Erie co., Durham Bull, May-Duke	$20
2d best, to James S. Wadsworth, of Geneseo, Liv. co., Durham bull, Rocket	12
3d best, to Lorenzo Hathaway, of Farmington, Ontario co., Durham bull, Welham	8
4th best, to D. & H. S. Brooks, of Avon, Liv. co., Durham bull, Defiance	Vol. of Transactions.

Class II.—Bulls.

Two years old and under three.

For the best, to Peter A. Remson, of Alexander, Genesee co., Durham bull, Prince of Wales	$15
2d best, to N. Chappell, of Avon, Liv. co., red-and-white Durham bull	10
3d best, to E. P. Beck, of Sheldon, Wyoming co., Devon bull, Sir Walter	5
4th best, to Guy Collins, of Bloomfield, Ontario co., red Durham bull	Vol. Tr.

Class III.—Bulls.

One year old and under two.

For the best, to C. F. Crosby, of Watervliet, Albany, Durham bull, Osceola	$15
2d best, to A. & J. McArthur, of Buffalo, Erie co., Durham bull Medoc	10
3d best, to Thos. H. Newbold, Caledonia, Liv. co., roan Durham bull	5
4th best, to E. P. Beck, Devon bull Wallace	Vol. Tr.

Class IV.—Bull Calves.

1st, to J. M. Sherwood, of Auburn, Durham, Logan, 5 months old	$10
2d, to J. Johnstone, Fayette, Seneca co., white Durham, George, 5 months old	6
3d, to L. F. Allen, Durham, Ben	4
4th, to the same Devon, Rover, 7 months old	Vol. Tr.
A special premium to C. S. Button, of Newark, Wayne co., for his 2-year-old bull, Osceola	5

Remarks.—The committee are constrained in justice to say, that in class No. 1 they had great difficulty in drawing a distinction between May-Duke and Rocket, so near did these superior animals approach to each other in purity of blood and points of excellence; while Archer, the property of Mr. Sherwood, was not reviewed, he having taken the Society's first premium at a previous exhibition. Also, that they can not but express the high opinion they entertain of Mr. Remsen's fine bull Enterprise, especially in view of several superior calves of his on the ground, which did him great credit, and to whom premiums were awarded.

In like manner would they notice, with much favor, Mr. Grinnell's excellent bull Albion, with several others, who in other fields where the competition would be less, could hardly fail of being distinguished.

In class IV., consisting of calves under one year old, the competition was so close, that the judges found some difficulty in coming to a decision, from the fact, that at the age limited to this class, the developments are so indistinct, that the most experienced judges have frequently found the calves that had received their commendation did not fulfil the promise they had impressed them with; while those they had considered less deserving of notice, claimed, at a mature age, their admiration, and proved better bulls than their more successful competitors.

There were many very superior grade bulls on the ground, which showed a due proportion of fine blood; but the committee would take leave to remark, generally, that the breeding of grade bulls is an unprofitable practice now, as the *thorough-breds* can be so conveniently obtained.

However desirable grade cows may be, the committee can not too strongly recommend to breeders the importance of breeding only from thorough-bred bulls, especially of the improved breed of Durham short-horns.

All which is respectfully submitted.

James Gowan,
W. Fuller,
L. A. Leland,
Wm. Garbutt,
Wm. M. Smith,
Committee of Judges.

Class V.—Cows.

Three years old and over.

1st, to John M. Sherwood, Panzy	$20
2d, to John Johnstone, Lady Sackett	12
3d, to L. F. Allen, Nancy Dawson	8
4th, R. H. Hyam	Vol. Tr.

Class VI.—Heifers.

Two years old and under three.

1st, to T. H. Newbold's Cassandra	$12
2d, to Anson Packard, Bristol, Ontario co.	8
3d, J. M. Sherwood's Sylph	5
4th, L. F. Allen	Vol. Tr.

Class VII.—Heifers.

One year old and under two.

1st, to J. M. Sherwood's Philippine	$10
2d, to L. F. Allen's Devon	5
3d, T. H. Newbold's Isabella	Vol. Tr.

Class VIII.—Heifer Calves.

1st, to William Cook, Lysander, Onondaga co.	$8
2d, to P. A. Remsen	5
3d, L. F. Allen	Vol. Tr.

REMARKS.—Having thus discharged the most pleasing portion of our duty, we would offer a word of consolation to those spirited individuals who have upon this occasion failed of success. They have all much merit, many of them in no ordinary measure; and we would urge them to a continuation of their efforts toward improving their stock, confidently predicting their ultimate success. A great deal of excellent stock, which the means at our command prevented our noticing by special premiums, commanded in no small degree our attention and approval. We trust we shall not be considered partial in specifying the Devons belonging to L. F. Allen and Mr. Beck.

Certain points occurred to us, in performance of our duty, which we feel incumbent upon us to bring under notice. We do so respectfully, trusting they will be received with a cordial and mutual desire to perfect the business of the association. Considerable difficulty and annoyance were experienced, originating in the praiseworthy, though perhaps somewhat overstrained multiplication of classes.

It appears to us, that *four classes* of cows would be found better than the number now adopted. For all useful ends we are disposed to think the following would suffice: Class first, *Durhams;* second, *Devons;* third, *Herefords;* fourth, *cows of any breed, pure or mixed—shown either as breeders or as dairy stocks.*

In course of our inspection, we frequently found misapprehension to exist respecting what is called *purity of blood.* It was supposed by several, that they possessed animals of pure descent, because the *sire* had been a pure *Durham,* and the *dam* a pure *Devon,* or *vice versa.* This is altogether a mistake, and will require *extremely* minute and strict attention. It would appear to us a most beneficial step toward forwarding the improvement of live stock in North America, should a well-organized Herd Book be prepared. It would assuredly meet with co-operation in Canada, whose breeders would then find a ready means of reference, and the only satisfactory check upon mistakes or frauds, while it would naturally bring the farmers and breeders of the two countries into more frequent intercourse, tending manifestly to the advantage of both.

One other point attracted our attention as deserving note—viz., the difficulty of deciding upon the respective merits of calves. Animals of all ages were brought forward, with nothing but the word of the exhibitor as to age. We would by no means convey the slightest intimation against the honor or veracity of the exhibiters on this occasion —far from it; but we confidently recommend that in future each animal of this description should bear a ticket, giving the day and date of being dropped. This would also, it may be observed, tend to produce more system and regularity in the management of stock.

In minor arrangements we would respectfully observe, that it becomes imperative to infuse *punctuality* in the arrival of stock upon the ground. Bulls, cows, &c., should be placed adjoining each other, each under a large and conspicuous board; and a forfeiture of the chance for the day should attach to any exhibitor leaving his animals without some persons equally competent with himself to answer any necessary questions, or until discharged by the judges.

By order of the committee,

ADAM FERGUSSON, *Chairman.*

G. V. SACKET,
H. BALDWIN,
ALGERNON S. ROBERTS,
J. W. BACON,
Committee.

CLASS IX.—COWS.

Cross between the native and imported breeds.

1st, to David Brooks, Avon, Liv. co.	$12
2d, to Jehiel Freeman, Geneseo, Liv. co.	9
3d, to Geo. C. Latto, Greece, Monroe co.	6
4th, to Allen Ayrault, Geneseo	Vol. Tr.

CLASS X.—HEIFERS.

Cross between the native and imported breeds, between 2 and 3 years old.

1st, to E. A. Le Roy, of Caledonia	$10
2d, to T. H. Newbold	7
3d, to Anson Packard	5
4th, to J. R. Murray, of Mt. Morris, Liv. co.	Vol. Tr.

CLASS XI.—HEIFERS.

Cross as above, over 1 and under 2 years old.

1st, to Calvin Ward, Richmond, Ontario co.	$10
2d, to the same	5
3d, to W. W. Wadsworth, of Geneseo, Liv. co.	3
4th, to David Brooks	Vol. Tr.

REMARKS.—There were two barren heifers, one belonging to ——— of Syracuse, the other to Stephen Bastable, of Salina, which, though valuable animals, your committee did not consider entitled to compete for premium.

There was a superior red-and-white cow belonging to Horace Hooker, of Rochester, and your committee only regretted that the premium-list was not sufficiently extended to include her.

HENRY S. RANDALL,
THOMAS WEDDLE,
LYMAN HIBBARD,
Committee.

CLASS XII.

Native breed, not having any imported blood.

1st, to Andrew Snider, of Henrietta, Monroe co.	$10
2d, to Wm. Sternbergh, " "	8
3d to George A. Mason, of Jordan, Onondaga co.	5

CLASS XIII.—HEIFERS.

Native breeds, between 2 and 3 years old.

No competition entitled to premium.

CLASS XIV.—DAIRY COWS.

Of any breed.

1st premium to George A. Mason	$15

REMARKS.—In view of the small number of animals exhibited for their inspection, the committee beg leave to state, that in their opinion the breeders of more than two thirds of all the cattle in the State are not in the least benefited (so far as cattle are concerned) by the State Society, although liberal premiums are offered, from the fact that so little competition exists among what are called common farmers.

We hope the editors of agricultural papers will call more attention to this subject hereafter.

JOHN WEBSTER,
LEE COMSTOCK, } *Committee.*
ABEL BALDWIN,

WORKING OXEN.

1st, to P. A. Remson	$15
2d, to — Stoddard, Onondaga co.	10
3d, to H. Long, York, Liv. co.	5
4th, to Jehiel Freeman, Geneseo, Liv. co.	Vol. Tr.

STEERS.

Three years old.

1st, to John P. Root, York, Liv. co.	$10
2d, to A. Ayrault	5
3d, to Robt. Allen, Syracuse, Onondaga co.	Vol. Tr.

TWO-YEAR-OLD STEERS.

1st, to A. Ayrault	$8
2d, to John Ayrault, Perinton, Monroe co.	4
3d, to Wm. W. Wadsworth	Vol. Tr.

YEARLING STEERS.

To Roswell Root (discretionary)	$8

REMARKS.—The Committee on Working Oxen report, that they have viewed, with much satisfaction, a large number of very superior working oxen; and they would willingly have awarded premiums to all, but as they were unable to do that, they found much difficulty in selecting the three best pairs.

In making their decisions, the committee endeavored to select those which would be most valuable for immediate use.

DAN. HIBBARD,
O. P. HOAG,
WM. COOK, } *Committee.*
C. A. GODFREY,

FAT CATTLE.

1st, to Jeremiah Brown, Ridgway, Orleans co.	$20
2d, to W. A. Mills, Mount Morris, Liv. co.	12
3d, to the same	Vol. Tr.

REMARKS.—The committee would name, with especial commendation, a grade Durham cow belonging to Philo Hamlin; a steer belonging to Allen Ayrault; two superior cattle belonging to Jeremiah Brown; and a pair of steers belonging to Mr. Godfrey.

There were other superior animals, the ownership of which we were unable to ascertain.

P. N. RUST,
HOLLOWAY LONG,
JOSEPH A. FROST, } *Committee.*
WM. OTTLEY,

FAT SHEEP.

1st, to George Caward, Seneca, Ontario co.	$10
2d, to T. Norman	5
3d, to Wm. Swailes, Sodus, Wayne co.	Vol. Tr.

REMARKS.—The committee on fat wethers would respectfully report, that they have examined several valuable individuals and pairs of fat sheep. None of their owners, however, complied with the conditions published by the society, viz., a statement of the method of feeding; the kind, quantity, and cost of the food; &c. Your committee have felt much embarassed by this omission. They have examined the animals, and reported which they consider best, without regard to feed, leaving it to the board to decide whether premiums shall be awarded. Your committee would recommend that, hereafter, ewes be allowed to compete with wethers for the premiums on fat sheep. There were some exceedingly fine ewes on the ground.

P. N. RUST,
HOLLOWAY LONG,
WM. OTTLEY, } *Committee.*
JOSEPH A. FROST,

PREMIUMS ON HORSES.

STALLIONS.

Over four years old.

For the best stallion, to Henry Paddock, of Penfield, and George Fordon, Geneva, owners of imported horse Alfred, 11 years old, 16½ hands high, a Cleveland bay, imported by Thos. Weddle	$20
2d, to Dr. William May, Palmyra, Wayne co., Morgan Tiger, 10 years old	12
3d, to E. Holloway, Lima, Livingston co., Young Fox-Hunter, 4 years old	8
4th, to Alexander Baldridge, Romulus, Seneca co., Gallant Coacher, 5 years old	Vol. Tr.

STALLIONS.

Three years old and under four.

1st, to Kinzey Sottle, of Chili, Monroe co., Young Post-Boy, a gray, 15½ hands high, 3 years old.

2d, to Ephraim Watkins, of Hopewell, Ontario co., Young Alfred, a bay, 15 hands high, 3 years old.

3d, D. G. Billings, of Clarkson, Monroe co., Mohawk, a roan, 15 hands high, 3 years old.

MATCHED HORSES.

For the best pair of matched horses—1st, 2d, and 3d, no premiums awarded.	
4th, to Joel R. Parker, of Rochester, for a pair of dapple grays, 16 hands high	Vol. Tr.

REMARKS.—The committee appointed judges of stallions, report, that of the number (26) of fine horses exhibited, there were several of blood, tracing back, not remotely, to thorough-bred horses of established reputation, both in the stud and on the turf. They felt controlled, however, by the general instructions of the society, to select for its premiums the variety of horses qualified for *all work*. There were exhibited at the fair, but too late for the due action of the committee, two good Canadian horses, which attracted much observation and approbation.

The same committee, appointed judges of matched horses, have to regret that better specimens were not exhibited. Of the eight or ten pairs entered for competition, in the opinion of your committee there was but one pair under the instructions of the society entitled to a premium.

R. F. W. ALLSTON,
A. AYRAULT,
FREDERICK F. BACKUS, } *Committee.*
SAMUEL GREENLEAF,
I. R. SPEED,

MARES AND COLTS.

For the best breeding mare and colt, to Alexander Baldridge, chestnut mare and bay colt	$20

2d, to Truman Roberts, bay mare and black colt	$12
3d, to Guy Markham, of Rush, Monroe co, bay mare	8
4th, to Milton Sheldon, Mendon, Monroe co., chestnut mare, Clio	Vol. Tr.

THREE-YEAR-OLD MARES.

1st, not being on the ground the second day, no award.	
2d, to J. K. Ballentine's bay mare	$5
3d, no award.	

(NOTE.—This committee, mistaking the intentions of the society, awarded a premium of $10 to J. K. Ballentine, for a gray stallion colt, sired by Young Lion of Monroe.)

REMARKS.—The undersigned, the committee chosen to award premiums on brood mares and colts, respectfully report, that they have attended to the duties assigned them, and carefully examined the unusually large number of animals exhibited. The committee, while they rejoice at the enterprise evinced by bringing upon the ground so many competitors for the premiums, feel constrained to say, that perhaps no one of the animals belong to the class intended by the society, viz., the *horse of all work.* It was, consequently, exceedingly difficult to find one without some striking defect, which ought not and need not belong to the stock of the perfect breeder. While they would be justified in withholding the premium from all of the animals of this class, for the reasons referred to, they think the ends of the society will be best promoted by making known the judgment of the committee.

D. S. CAMPBELL,
ABRAM VAUGHT, } *Committee.*
OWEN JONES,

PREMIUMS ON SWINE.

Over ten months old.

For the best boar, to H. O. Hills, Vernon, Oneida co.	$10
2d, to Daniel Budd, Greece, Monroe co.	8
3d, to S. Tibbitts, Pittsford, Monroe co.	5
4th, to N. Hayward, Brighton, "	Vol. Tr.
For the best breeding sow, to R. L. Allen, Berkshire	10
2d, to Wm. Wheeler, Rochester, Monroe co.	8
3d, to John Langham, " "	5
4th, to P. A. Smith, Greece "	Vol. Tr.

REMARKS.—Among the swine worthy of particular attention, was a pen of eight shotes and a sow, whose owner we did not see. They showed what can be done by a judicious crossing of the two leading breeds, the Berkshire and Leicester.

Mr. M. Garret, of Gates, had a very good Leicester sow and pigs. Mr. Tone, of Chili, had a Leicester sow and pigs; and a boar and sow of M. Wadhams were very good.

The committee do not deem it their duty to enter into an elaborate discussion as to the best breeds; but they give the basis on which they acted in awarding the premiums. They do not consider it any object to raise or encourage the raising of a very large breed of hogs, so far as the farmers of this State are concerned. Where corn is easily raised and at a distance from market, a large breed of hogs may be tolerated; but where the utmost economy is to be used, a middling-sized breed of hogs is decidedly preferred. A hog of fine bone, light head, small ears, a good ham, and deep broadside, that will mature early, and when fattened at 12 or 18 months, comes easily up to 300, must be profitable to provider and consumer. In behalf of the committee,

T. C. PETERS, *Chairman.*

PREMIUMS ON SHEEP.

CLASS I.—LONG-WOOLLED.

For the best buck, to Wm. Swailes, Wayne co.	$10
2d, to Thomas Terry, Mt. Morris, Liv. co.	8
3d, to Wm. Swailes	5
4th, to John Bettridge, Riga, Monroe co.	Vol. Tr.
For the best pen of 3 ewes, to Allen Ayrault	$10
2d, to Luke Cheesebro, Auburn, Cayuga co.	8
3d, to James Beatty, Greece, Monroe co.	5
4th, to Wm. C. Cornell, Henrietta, "	Vol. Tr.
For the best pen of 5 lambs, Leicesters, to same	$5

CLASS II.—MIDDLE-WOOLLED.

For the best buck, John M. Sherwood,	South-Down	$10
2d, to J. Parsons	"	8
3d, same	"	5
4th, same	"	Vol. Tr.
Best pen of 3 ewes, J. M. Sherwood,	"	$10
2d, to Richard Randle, Chili, Monroe co.		8
For best pen of 5 lambs, to J. M. Sherwood		5

REMARKS.—The committee noticed two pens of choice ewes, and one of fine lambs, which were entered as middle-woolled; but as they were a mixture of long and middle wools, they did not consider themselves at liberty to assign them a place in either class submitted for their examination.

They experienced much difficulty in deciding some of the premiums on long-wool bucks, owing to the large numbers of very choice animals of this class which were exhibited.

In conclusion, the committee would say, they perceive, with no little gratification, the decided improvement now making in the long and middle-wool sheep in this country, considering them and their crosses, as they do, a profitable animal in the neighborhood of large markets, from the great value of the carcass for mutton, which usually brings, when well fattened, at least 50 per cent. more than pork. They will be excused for adding, at least by the intelligent farmers of the State of New York, a class of citizens so capable of appreciating and so deeply interested in the subject, that if protection to American labor, American intelligence, and American capital, is to be the settled policy of the United States, as it can not but be hoped it will from the beneficial effects so recently, yet so largely experienced from it, the immediate commencement, on an extensive scale, of worsted and other similar fabrics for which the long-wool furnishes an indispensable material, will afford to them a large and permanent demand, and a greatly increased value.

R. L. ALLEN,
S. E. HUDSON,
F. M. ROTCH, } *Committee.*
THOS. HOLLIS.
W. R. RANDALL,

CLASS III.—FINE-WOOLLED.

For the best buck, to Charles Colt, Geneseo Liv. co., Saxon	$10
2d, to Roswell Root, York, Liv. co.	8
3d, to Norman Frisbie, Vernon, Oneida co.	5
4th, to Gideon Cobb, Brighton, Monroe co.	Vol. Tr.
For the best pen of 3 ewes, to Charles Colt	$10
2d, To Roswell Root,	8
3d, to Norman Frisbie,	5
For best pen of 5 lambs, R. Root,	5

The above class are reported by the Committee as being all Saxony.

MERINO BUCKS.

1st, to Edmond Fellows, South Chili, Monroe co.	$10
2d, to Luke Cheesebro	8

REMARKS.—The sheep presented for exhibition, as a whole were creditable; and the committee take the opportunity to commend highly both the form and fleece of those exhibited by Mr. Charles Colt, of Geneseo, to whom they award the first premium.

In making this remark, it is not our intention to disparage several other lots which were good specimens as regards staple and fineness of hurl, especially those of Mr. Frisbie, of Vernon, Oneida co.; but a prominent objection appeared to his, namely, want of compactness of fleece—a most defective point, when our rigorous climate is considered. This objection, however, would not apply to those of Messrs. Roswell Root & Brothers.

The committee would gladly embrace this opportunity to extend these remarks, with a view to encourage a more extensive growth of fine wool, now from its scarcity so desirable to American manufacturers, as well as dwell on those points in relation to certain properties of fleece and carcase, indispensable to profit, did time permit.

The committee, with the sanction of the executive committee, have classed the Saxon and Merinos by themselves, which we respectfully recommend should be a permanent arrangement in the premium-list hereafter, as equal justice will be rendered to both those distinguished varieties of sheep.

Several good specimens of Merinos were exhibited; but the committee take the liberty to remark, that nearly all called such, were but grades and imperfect imitations of the general excellence of this variety in their purity.

Several bucks were presented for exhibition by Mr. S. W. Jewet, of Vermont, said by him to be of the Paular breed, which we were also told have produced heavy fleeces.

The ewes exhibited as Merinos were but grades, and therefore the committee did not feel authorized to award any farther premium.

L. A. MORREL,
I. P. BEEKMAN,
JOHN JOHNSON, *Committee.*
WM. RANDALL,
R. HARMON, JR.,

REPORT ON AGRICULTURAL IMPLEMENTS.

From the vast importance attached to a labor-saving machine, that will perfectly and cheaply thrash wheat and other grain, the mechanical ingenuity of this country has been taxed to its utmost extent to perfect such an implement, and almost every county has its favorite machine. The operative part of the process is pretty generally settled on the *spike-cylinder*, originally introduced by a Mr. Douglas, of Skaneateles; but the motive power assumes as many forms and contrivances as the patent churn, or washing machine, from the cumbrous and complicated, to compact, simple, and unique. To describe the various forms would be tedious, and of but little use; and it was impossible for the committee to imperatively decide upon the relative value of them all, as nothing short of long and practical use can endorse any new invention as the ultimatum required.

The committee have come to the conclusion, from their own previous experience and from investigations made by them, that a two or three horse-power machine, that will thrash from 100 to 150 bushels of grain per day, with a farmer's own team and his own hands, is the most desirable and profitable for the great mass of farmers; while perhaps a larger and more extensive power is the best for those who travel the country and thrash by the bushel, and for large grain-growers. A large number of horse-powers were submitted to the inspection of this committee, several of which were without thrashers, or the means for testing them by actual experiment. Among these was a very ingenious, compact, and well-constructed machine, by A. D. Child, of Rochester, which promises, as far as this committee can judge by simple examination, to be one of the best applications of horse-power that was ever offered to the public. Another one offered by Mr. S. B. Traver, of Rochester, being Davenport's patent, combines many very desirable points, and is now in actual use, but was not exhibited to the committee in that form. Both of the foregoing machines are constructed upon the principle of *internal gearing*, with the *sun-and-planet* wheels. Mr. L. Bostwick, of New York, exhibited a machine at work before us—a very compact, simple, and effective horse-power, with a thrasher of the *beater* principle; but the committee were unanimous in giving the preference to the *spike*-thrashers.

That description of machines termed *tread-powers* were also exhibited to the committee. They appeared to perform the work expeditiously, and with ease to the horses, and the committee would not be surprised if they should eventually become great favorites among the farming community. The thrashing-machine, for which the committee have awarded the first premium, has been well proved, several hundred of them being now in actual use. It is well constructed, and combines a cleaner and separater.

[To be continued.]

BUFFALO GRASS.

WE find a communication in the National Intelligencer from Captain Cook of the United States Dragoons, to F. Markoe, corresponding secretary of the National Institute, on the subject of this grass; and if all there said of it prove correct, it can not but prove a valuable herbage to be introduced into cultivation among us, especially on barren hills, and such lands as are liable to be poached by herds of cattle. Captain Cook says: "It flourishes on a poor, thin soil, in an arid climate, is of a pale green, and falling, it takes a slight root on the joints of the stock; these joints are eight or ten in number, and four or five inches apart. This peculiarity is only observed on a close inspection, for, the joints also sending up a short stem, on which is found the grain and slender blades, it resembles an unthrifty blue grass; and, like that, it forms a sod, and a smoother and far harder one. About harvest time the country turns to the yellowish brown color of our ripe grain fields; and in extensive views the eye is only relieved by the green of a single variety of spice-weed, which dots the smooth brown surface of the earth. Thus, so short and very withered in appearance, it seems wholly insufficient to support animal life, while proving with its grain a rich and ample food for countless buffaloes; and also for the diminutive but far more numerous prairie-dogs. Some say the grass will only grow where the buffalo is found; that it disappears as they recede. For a hundred miles we see it almost continually in the road, when little or none other is to be found. If this goes to prove that trampling is essential to its growth, the above idea is strengthened by our knowledge that the immense herds of buffalo must subject it fully to this treatment. I think I nowhere saw the grass in quantity ungrazed by the buffalo; in the lower river bottoms, amid the succulent, green, rich *looking* grass of several species, *untouched* by the buffalo, little patches of this were observed closely eaten. After the last winter and spring of unheard-of severity and backwardness, we found the buffaloes quite fat on the 13th of June.

"Our dragoon horses had to subsist for some time on this grass; their being able to do so at all, so closely grazed as we found it, and under the necessary restriction of a 22-feet picket rope, would seem to prove its extraordinary nutrition. Only one other fact will I mention, and I do not explain it. I found it on my return, near Council Grove, about the middle of July, in the road, taller and greener than almost any I had seen earlier and farther to the west. I shall send you, by the first opportunity, a half pint of the grain, which I picked with my own fingers: it can be gathered in no other way."

MR. ROTCH IN EUROPE.—Among the passengers in the steamship Caledonia, which sailed from Boston on the 1st inst., were Francis Rotch, Esq. and family, of Butternuts, Otsego co., this state. Mr. R. and his son go out with a view of examining the agriculture and stock of England, and other parts of Europe, and will probably be absent at least two years. From his accurate and scientific knowledge of these matters at home, and a long previous residence abroad, his observations will be of the most valuable kind; and we trust that he may be induced to give them to the public in a tangible shape. A work from him on the subject of agriculture, and especially stock, would be sought for and read with eager interest. We quite envy him his agricultural tour. May himself and family enjoy health and happiness abroad.

OBITUARY.—We learn with deep regret of the death of William Lincoln, Esq., of Worcester, Massachusetts. He was an able lawyer, distinguished for literary attainments, and had frequently been a representative in the legislature of his state. But his great celebrity, and what most endeared him to the agricultural community, was his reports on swine; he being for a number of years chairman of that committee at the county shows of Worcester. These reports were extremely humorous and witty, and invariably drew forth hearty peals of laughter from the stout yeomanry annually assembled to hear them. His report to the New York State Agricultural Society at Albany last year partook of the same characteristics. He was an estimable citizen, and has left a void that it will be difficult to fill.

DORKING FOWLS.—Mr. L. F. Allen took a number of these fine birds to the late Agricultural Show at Rochester, with a view of exhibiting, and then sending them to this city for distribution among his friends. For safe keeping, they were placed under the care of a servant at the Eagle Tavern; but soon after dark, the chief cook espying so fine a lot of birds, thought they would do great credit to the dinner-table the next day, and without knowing their breed or value, cut off their heads, and sent them down to his aids in the kitchen for preparation. Our friends must take the disappointment as coolly as possible, and wait another year for their Dorkings.

THE NEW-ENGLAND FARMER.—We regret to see that Mr. Putnam has retired from the editorial department of this journal. Mr. Joseph Breck, one of its proprietors, takes his place, and we have no doubt that he will continue the paper to the satisfaction of its readers.

STOCK FOR SALE.—We would call attention to the advertisement of Messrs. Hendrickson & Co. of Ohio. They go down the Mississippi river the present month, with a fine assortment of different breeds of animals, and we recommend them especially to our southern friends, as men of strict probity and honor in all their dealings. It is well known that we imported Windsor Castle and other stock belonging to them.

☞ We have commenced the publication in this No. of Dr. Mohl's powerful article reviewing Leibig's Vegetable Physiology. We shall continue it as fast as received in the Gardeners' Chronicle, from London. Our readers will find it an able paper and a rare treat.

☞ Have any of our readers Lord Sommerville on Devon cattle? If so, we shall be extremely obliged to them for the loan of it a short time.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

PROGNOSTICATIONS OF THE WEATHER.

Hackettstown, September 16th, 1843.

Although the weather-table of Dr. Adam Clarke has been frequently published in past years, yet I had never given it any special attention, till its republication in your July number. To be "weatherwise for a few days in advance," would be very agreeable indeed to the farmer. Human knowledge concerning the weather is but very limited at best—that is, practically so. Even the small degree of knowledge concerning atmospheric changes, possessed by all, seems to have remained without advancement since the first ages of the world; with no addition or improvement, or new discoveries to overthrow or confirm the prevailing opinions till the present day, when the labors of Espy and others have certainly contributed something to this department of science.

But even their theories and systems are as yet but theories only, which time and further observation may substantiate or overturn. I have never seen any statement of, nor am I acquainted with, the theory upon which Dr. Clarke's table is based; but I have often noticed that the weather following the new or full moon was such as indicated, and was thereby led to place some confidence therein, which I must confess, is rather shaken by the observations made since public attention has again been called to it in the Agriculturist.

1. I commenced upon the 19th July, when the moon entered the third quarter, between 8 and 10 A. M., where the table prophesies changeable weather; but it was as unchangeable as any could wish it, being very hot and dry, with a westerly wind, and no rain. "But all signs fail in dry weather" we are told.

2. New moon near midnight, clear weather according to the table, and so it was for three days, succeeded by a rainy one—and three others mostly cloudy, with a very unsteady wind. This was changeable.

3. First quarter of the moon on the 2d of August, between 6 and 8 P. M., with a southeasterly wind, and rain to come, by the table. Got but very little the first day, none at all the second, and upon the fourth came the great fall of rain, occasioning the extraordinary freshet in New Jersey and about Philadelphia. Two of the last three days of this quarter were very changeable, and the other a very stormy day.

4. Full moon near midnight, when clear weather is indicated. The first two days, considerable rain fell. During the rest of the quarter, had one dark and cloudy day, two partially so, with rain at night, and one clear day.

5. Moon passed into the third quarter, near 2 A. M. on the 18th August. The table says clear, but before 24 hours came, another fall of rain, followed by one clear day, and the rest of the week cloudy and stormy, except the last day.

6. New moon near 10 A. M. upon the 25th. Changeable by the table. First three days very settled weather, with foggy mornings, and an atmosphere extremely hot and oppressive. Then followed one day changeable, and the last three days were settled again.

7. Just after midnight upon the 1st September, the moon entered her first quarter. Clear weather to be looked for by the table—first day stormy, second somewhat cloudy, third fair and hot, fourth still hotter—heavy showers passing round, fifth fair, sixth cloudy and threatening, seventh one of the stormiest days of the season.

8. The moon became full upon the 8th about 2 P. M., table saying changeable, as was the case for three days; being mostly cloudy, cool, and the wind shifting east and west of north. The rest of this quarter was mostly settled and clear, except near the last, when there was quite a fall of rain from the east, with a most violent wind. There Mr. Editor, I have now followed the moon through her phases for two successive revolutions, and now I leave your readers to their own conclusions. But the observations ought to be continued for a year, in order to judge correctly, and perhaps I may continue them if you wish it.

Although we have here two such men as Dr. Herschell and Dr. Clarke standing up for lunar influence upon the weather, yet there are others equally positive in their conclusions to the contrary. I shall close with the two following quotations. The celebrated Arrago collected from various sources, all the well-authenticated facts in relation to this subject, and says, that "there was no reason whatever to confirm the common notion, that changes of the weather attended changes of the moon, or that this luminary is in the least worthy of notice, in conducting the processes of agriculture."

That the influence of the moon upon water produces the tides all ought to know; but if any think its influence upon the water in the atmosphere equally as decided, let them be reminded of the opinion of the late Dr. Olbers, a distinguished astronomer of Germany, who, after careful observations for fifty years, declares: "I have demonstrated that the influence of the moon upon the weather is so small, that it is totally lost amid the great variety of other forces and causes which change the state of our atmosphere."

A. R. D.

For the American Agriculturist.

WISCONSIN.

Buffalo, September 12th, 1843.

Wisconsin seems to be the great object of attention for western emigrants at the present moment. Whether it is that apprehensions of an unhealthy climate, or the excessive indebtedness of the older western states, Michigan, Indiana, or Illinois, deters new emigrants from entering their territories, and many already there from remaining, certain it is, that while each of the foregoing states are increasing but moderately in comparison with former years, Wisconsin is augmenting her population and agricultural improvement beyond that of any other portion of equal extent in the United States. The causes that have produced this general and wide-spread popularity, for it is equally known and appreciated in Europe as in this country, are principally these:—

1. It is throughout its entire length and breadth a perfectly healthy region.

2. It possesses a uniformly, highly fertile soil, yielding all the ordinary products in great luxuriance, which are adapted to the latitude.

3. It is peculiarly a wheat-producing country, having a soil nearly everywhere equally removed from a light sand or heavy clay, and abounding in *limestone*, which is scattered through the soil and intimately blended with it. This last characteristic will give to the soil, with proper management, an endurance of wheat, as lasting as time; and as wheat is to be the great staple of our northwestern states, this is a consideration of the highest importance.

4. The water is pure and in most places abundant, yielding a full supply for cattle and the ordinary wants of the settlers; while through all the northern portion, the finest mill-streams abound, and are ready to supply their mills and future manufactories with all the water-power required to make it, what nature seems to have destined it hereafter to become in the hands of the Anglo-Saxon race, the *manufacturing state for the west.*

5. The inexhaustible mines of lead which can be wrought for ages, not only to the profitable employment of those directly engaged in digging, purifying, and sending the metal to market, but with equal profit to the farmer, who finds in the miners a demand for his products at remunerating prices. The successful working of copper mines will probably be added hereafter to those of lead.

6. Its accessibility to market, having the Mississippi on one side, and Michigan on the other, with the Wisconsin and Fox rivers intersecting through the north, and connecting the former by a steamboat navigation, unbroken save at the Portage for one and a half miles, and the falls on the Fox, at the Grande and Petite Kaukalaus. These advantages combined, render it inferior to no new land ever offered to the enterprise of an intelligent people, and it is not to be wondered at that it enjoys a popularity never before accorded to a new state.

But I wish to call the attention of emigrants to one consideration, which is seldom sufficiently weighed. It is the propriety of thoroughly settling the coast, especially near the harbors, before pushing their way far into the interior. This may be done with the strictest regard to their interest, even if the cost of the land much exceeds the government price. The relative advantages of two positions, one near and the other remote from a market, are readily seen on the most superficial estimate. Let us see the cost of transporting wheat from a farm 50 miles from a port. In an ordinary condition of the roads, it will take a man with a span of horses and wagon, three days to carry 40 bushels a distance of 50 miles and return. The lowest estimate for time and expenses, can not be less than $1.50 per day, or $4.50 for the trip, which is equivalent to a charge of 11¼ cents per bushel on the wheat. If we assume 25 bushels per acre as an average yield, we shall have the annual cost of sending an acre of wheat to market $2.81, or the interest of nearly $50 per acre. To this consideration, we must add this much more important one; that on farms remote from a market, scarcely anything except wheat, wool, and meat, will bear transportation, while all the coarser products, oats, corn, roots, hay, &c., and all the minor ones, such as garden vegetables, poultry, eggs, fruit, &c., &c., will always command a ready and profitable sale in a thriving, populous village, where steamboats are daily stopping for supplies. We can thus readily see how a man may give $50 an acre for land near a port, and make much more money out of his investment, than to pay $1.25 an acre for an equal or even a better quality, remote from it. Most of the land within 30 miles of the coast in the southern part of the territory, has been taken up, and can not now be bought unless at enhanced prices.

There is, however, a beautiful section of fertile land lying around the Manitouwoc river, 74 miles north of Milwaukie, which, owing to this place being somewhat out of the course hitherto run by steamboats, has been but partially settled, and the finest wheat-lands can now be taken up at government price. Senator Tallmadge has recently bought a farm on Lake Winnebago, about 30 miles west of Manitouwoc, having been tempted from the refinements and luxuries of an old country, and such a country, too, as Dutchess county, and the banks of our noble and picturesque Hudson, by the enchantments of Wisconsin. While there during the last summer, I met another gentleman from the southern part of Indiana, who assured me he could raise 75 bushels of corn per acre over his whole farm, and that too without hoeing, and yet this farm he is abandoning for one in Wisconsin, for three reasons; to get nearer a market; into a healthy country; and where he can have schools for his children. One gentleman assured me he had been offered this season $10,000 in cash for his farm and stock, the former taken up but a short time since at $1.25 per acre.

The activity, intelligence, and improvement, everywhere exhibited in a seven years' settlement of this recent country, are almost incredible. In the spring of 1836, I visited this territory, then containing, probably, less than 5,000 white inhabitants; now it is computed it has 100,000. Then, a few log-houses, scattered here and there at great distances along the uncultivated prairie, and almost unbroken woodland, just served to remind the traveller that he was not in a region wholly unreclaimed from the wild beast and the savage. Now the comfortable house everywhere meets the eye, and the snug out-buildings and extended enclosures, with the luxuriant crops, and numerous herds of cattle, sheep, and pigs, with all the home comforts in prodigal abundance, give assurance that this is indeed a land flowing with milk and honey. All the improved breeds of animals are there found in large numbers and in great perfection. Many choice Short-Horns and Berkshires I saw near Southport, Milwaukie, Manitouwoc, and other places.

If there be any feature that pre-eminently distinguishes the citizens of Wisconsin, it is their clear-sighted activity and intelligent enterprise, which insure the general adoption of the best breeds of domestic animals, the latest improvements in implements, and the most approved systems of husbandry, unshackled by the narrow-minded objections, and the clogging influences of legendary prejudices. Here we see the novel combination of one of our most recently settled states, more highly advanced as a whole, in an agricultural point of view, than any other portion of the Union. This youngest sister of ours seems to have burst into existence, like Minerva from the head of Jupiter, mature in wisdom and arts. The world does not afford an example of a country springing at once, as if by a single bound, from a state of uncultivated nature, into one of such sudden and complete civilization.

R. L. ALLEN.

For the American Agriculturist.

COTSWOLD SHEEP.

Hereford Hall, near Albany,
August 10th, 1843.

WHEN the Cotswold sheep first came into notice in England as *early feeders*, the Leicester men were strongly opposed to them, which was a *good omen* of their being something superior. It is true they originated from large, coarse, shapeless animals; but their quality of flesh and heavy fleeces were sufficient indication for a scientific breeder, to exercise his skill in improving their symmetry.

Mr. William Hewer, Senr., was the first person under my observation that undertook it to any extent. Although no breeder in the United Kingdom made more rapid improvement, he had a long up-hill course to run; but his *courage and perseverance* during this time never failed him. He made it his constant care and study, and was highly delighted when he recovered a bad point, and I will venture to say, that three fourths of the Leicester flocks are now mixed with his Cotswold blood; and the farmers have been well satisfied with the produce.

I have long been an eye-witness to the improvements made in Oxfordshire, from rams of his breeding, for I purchased for eight successive years from five to fifteen shearlings yearly, for my father and neighbors. Our flocks were mostly of the finer bred Leicesters, and we were obliged to keep our wethers two years before we could fat them, or sell them as store tegs to the jobbers or graziers. After the introduction of William Hewer's rams into this country, the farmers generally sent their tegs to market bare shorn, twelve or thirteen months old, and sold them for more money than they previously did with their fleeces on, at the same age, and the same mode of keeping. Mr. Hewer had been working hard for many years to improve, and selected but very few of his best lambs to sell by private contract, before he commenced his annual ram sales. He soon obtained heavy rumps, wide briskets, long faces and ears, but found it very difficult to *secure* fat backs, and level crops. The first sale I attended, I purchased two to put to my father's ewes; I paid twenty-one guineas for one, and eleven for the other. The former was an excellent sheep, there were but few points I wanted to alter; he was a little high in his loins, deficient in his legs, (but here our ewes were good,) and rather coarser in the bone than I wished. I particularly wanted a good rump, level crop, long face and ears; these I had, and most other points accompanying them, which a breeder should always look to, and not lose *three or four points to gain one*. The latter had many deficient points; but the principal one was his crop, a very difficult one to improve, and a very important one to the breeder. This is a point I look to beyond all others, I think it is a true indication of bad quality, exorbitant consumers, and slow feeders. Give me a "*straight bottom, and a straight top*," with a mellow touch, and I can soon improve the rest. No animal can come to market *early* with a bad crop and a heavy paunch, this I know from experience, which I will state hereafter.

Mr. Hewer refused one hundred guineas for the use of one sheep for this season. The average of Mr. H.'s sale appearing in the country papers brought many farmers to examine mine, they being the first that had made their appearance in that part of the country. I was proud of them I will allow, and might have "boasted" a little, being young, and glorying in the "*best*." The highest priced sheep was very much admired; the other was not despised; the price was the only difficulty. Five to six pounds was the extent the farmers were then in the habit of giving. One wanted to put one or two ewes, another, three or four to get a tup lamb, but I refused all, put the best to eighty of the best ewes, the other to thirty culls. I never saw such an improvement as the best sheep made; he paid the extra price in extra quality the first season, for I sold thirty-seven wether tegs of his getting, (bare shorn,) at Smithfield, for one and sixpence per head more than I sold the spring previous with their wool on, and their fleeces weighed four to the tod, an average of seven pounds each. I sold the wool that season at one pound twelve and sixpence per tod; the thirty-seven fleeces amounting to fifteen pounds and sixpence; one and sixpence per head more than the previous year, (without any rise in mutton and store stock,) made two pounds fifteen shillings and sixpence, which left the extra quality of five ram tegs, and forty-four ewes to pay for first cost of ram; a balance of only four pounds fourteen shillings. I sold the get of the other sheep with their wool on, not being fit for market, for a little more money than the sheared ones, because their size was increased, and suited the eye of the grazier, but their crops were bad, and they wanted time and rich pasture before sent to market, which the Buckinghamshire graziers could give them. This opened the eyes of the Oxfordshire farmers.

I attended the next sale, and my lambs being so much better than my neighbors', I had a commission to purchase five. The third sale I purchased thirteen, and there were twenty-three came into the county of Oxford. Since that time nearly all the long-wool sheep in that county are crossed directly or indirectly from Mr. Hewer's flock. They have stronger constitutions, more wool, a better mixture of fat and lean, and the advantage of early maturity. The last sale I was at, which was in 1840, I purchased nineteen, which I brought to this country. They averaged me $110 each. Several were sold from sixty to ninety guineas; and I saw one hundred and fifty guineas offered for one sheep! It was the general opinion that a better sheep was never seen for size, symmetry, quality of flesh, and weight of wool. When I say this, I do not make any comparison with the South-Downs, for I think Mr. Jonas Webb has made as rapid improvement in that breed, and deserves as much credit. I think two such breeders ought to be valued as highly as men can be; they are a nation's prop. *They are men who have done their duty.* All that is required in this country is a few such breeders; if they possessed the *true spirit*, trifles would not stop them, "*depression*" would not check their enterprise; the more they became engaged in it, the greater would be their pleasure, delight, and profit; but now, some get tired of it because they *do not study it*, and *allow* their stock to degenerate from *bad management*. This climate is equal to any in the world; it only wants care and *judgment* to produce the *best animals*.

Breeders of stock stir up your *courage and your judgment*, and then you will do your duty; do not give up before you have learned your business—then is the proper time to pursue it for your own good, and that of the country.

William H. Sotham.

For the American Agriculturist.

CULTURE OF SUMACH.

There are three species of sumach used in dyeing—the Rhus Glabrum, the Rhus Coriaria, and the Rhus Cotinus. The first (Rhus Glabrum) is the common sumach of North America, such as is generally used by our country dyers, and to a limited extent by our morocco tanners. The annual peduncles with their leaves are gathered, dried, and are generally used without grinding. I have never known or heard of any regular manufacture of this article since I have been in the country, and I shall now offer some observations which I hope may draw the attention of our southern planters to the advantage of cultivating it for the market.

"Of all astringents, sumach bears the greatest resemblance to galls. The precipitate, however, produced in solutions of iron by an infusion of it, is less in quantity than what is obtained by an equal weight of galls; so that in most cases it may be substituted for galls, the price of which is considerable, provided we proportionally increase its quantity."

It is well known to botanists that the most astringent vegetables, or those containing the largest portion of gallic acid, are brought from warm climates; and the following facts will prove that the quality of sumach also depends on the warmth of the climate in which it grows. The sumach grown in Europe is the Rhus Coriaria. That which is grown in the north of Europe, and imported from Trieste, is inferior to our own, excepting a small portion grown in the Tyrol, and even this portion is not superior to the best American; whereas, that grown in Sicily, Syria, Palestine, Spain, and Portugal, where it is cultivated with great care, is found by experience to be vastly superior to that from Trieste, and will sell for nearly three times as much. A similar difference is observable in the sumach grown in our own country. That from the southern side of New Jersey is superior to that obtained from the state of New York, and that from Virginia is superior to the New Jersey; and I have no doubt that the same plant raised in our southern states, Florida for instance, dried with proper care, and fine ground, would be nearly or quite equal to the best imported.

Sumach should be cut or gathered in clear weather, and should be so spread on a floor as to dry rapidly; for if only a small part should ferment, the whole mass will be seriously injured in its marketable value. It should be fine ground when dry, and packed in bags containing about one hundred and sixty pounds each, net weight. No rain or dew should be permitted to fall on it after cutting, for even the damp from the hold of a ship will injure its quality greatly.

The Rhus Coriaria is a much smaller shrub than the Glabrum, the leaves are nearly three times as long, and the annual stalk much smaller. Of this sumach, from ten to fifteen thousand tons are annually imported for the use of our manufacturers. The importation into this country is mostly from Sicily. Should the Glabrum be found inferior, the Coriaria could be substituted for it.

I am informed that sumach will not re-produce from the seed, and if this be true, there would be some difficulty in introducing the articles to any extent, excepting by some slow persevering process; as it would have to be extended by layers. It is said to be hybridous, in which case some plants brought from Sicily, and planted close to our Glabrum, would enable the seed of both to reproduce, and in this way might be extended at pleasure.

The price of Sicily sumach has varied in our market from forty-two dollars per ton, to one hundred and twenty, within the last eighteen years. So that if our southern planters could supply the home market they would realize more than *one million* of dollars per annum on the present demand, and as this will annually increase, it is more than probable that in twenty years the consumption will double.

The following is the botanical description of this plant. Coriaria—elm-leaved sumach—leaves pennate, leaflets oval, bluntly serrated, downy beneath; their common stalk winged in the upper part; flowering in July, and retaining its dense, branched, ample, upright clusters, of deep red, rough, coriaceous berries, even till winter, after the leaves are fallen. The tree is of a dwarf, bushy habit, with spreading, ascending, round downy branches, of a soft spongy texture. Leaves from eight inches to a foot long, of about five pair of leaflets, with an odd one; paler, downy, and veiny beneath. Flowers greenish, each with a large, hoary germen, which becomes a globular, crimson, hair berry, the size of an elder berry. The taste of this fruit is very acid and astringent.

The Rhus Cotinus, or Venice sumach, is also an important article in dyeing. It is known in England as young fustic; the stem and trunk of the shrub, and the root, are bought and employed for dyeing golden and orange yellows. The leaves and stalk when bruised, have an aromatic but pungent and acid scent.

This plant is grown in our nurseries and sold as an ornamental shrub. It is by some called the fringe tree, and by others the burning bush; at least such have been the names given me by inquiring of the owners. It bears a large, drab-colored, flossy blossom, and grows very luxuriantly in all our shrubberies. I have had much inquiry for the article, but as none is imported into this country, I could not supply the demand.

The Cotinus is cultivated by layers, and from a few plants a large number might soon be obtained. The stalks sent to market in Europe are from one to two inches in diameter, with the bark taken off, therefore cut, I presume, when the sap is running. There is considerable thickness of white sap outside, and dark yellow and orange-colored rings inside, which latter is the coloring matter. The wood is soft and easily cut with the heel-cutter's knife. The leaves on this wood when cut, are gathered, dried, and ground with the other sumach.

Wm. Partridge.

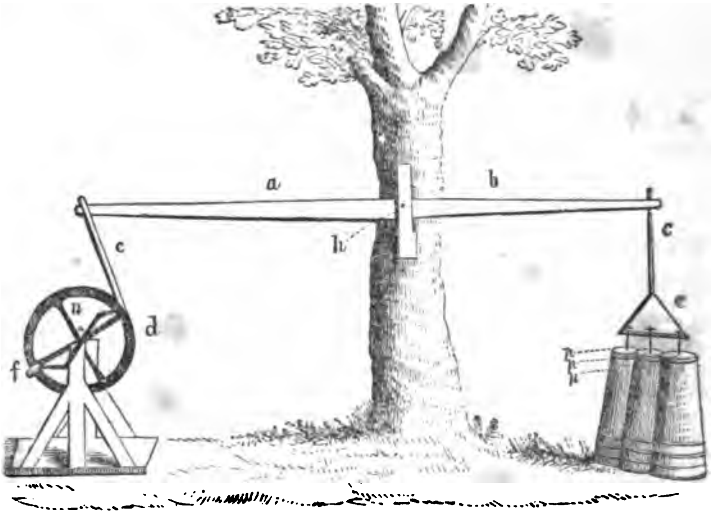
For the American Agriculturist.

VIRGINIA CHURNING APPARATUS.

Llangollen, Ky., October 9, 1843.

In my late visit to Virginia, I met with an efficient churning apparatus, a side-drawing of which is given below. Its merits are its cheapness and simplicity. A boy or girl of twelve years of age can with great ease work three or four churns. The principle, you will perceive, may be applied to any number of churns, worked by any motive power proportioned to their number and capacity. All the parts are of wood, except the crank, axis of the fly-wheel, and pin *h*.

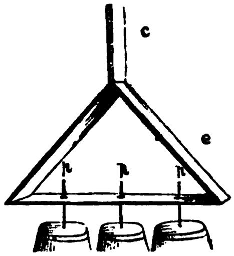
Virginia Churning Apparatus.—(Fig. 53.)



a, 8 feet long; *b*, 6 feet; *c*, *c*, eight feet; (longer still better;) *d*, fly-wheel, of wood, 5 feet diameter, heavy, with crank *n*, adapted to the depth of the churns *e*; *f*, the crank and handle for working-boy or other motive power. The churns should be placed on a board with marks to indicate the exact position of the base of each churn. *h*, iron pin. Take out the pins *p*, *p*, *p*, and the churns are detached, and may be removed.

John Lewis.

Front View of Churns.—(Fig. 54.)



For the American Agriculturist.

IS CHESS THE ORIGINAL OF WHEAT?

Virginia, August, 10*th*, 1843.

With the general tenor and object of Mr. R. L. Allen's communication on "new varieties of wheat," in the August No. of the Agriculturist, I heartily coincide. In my own feeble way, I have from time to time endeavored to impress upon my brother farmers the importance, not only of obtaining new varieties, but of preserving in their purity those which have been proved to be valuable.

But your correspondent, in order to incite to this praiseworthy object, undertakes to make suggestions, and to enforce them by facts, which should not have been expected from an enlightened man in this enlightened day. I have for many years read Mr. Allen's writings with great pleasure, and have regarded him as a distinguished laborer in the cause of agriculture. Under the signature of Ulmus,[*] in the old Genesee Farmer, (*Ulmus Buffaloensis* I think he was familiarly yclept, when I visited the glorious region of western New York some six or seven years ago,) he has often commanded the attention of its readers, and delighted them with the elegance of his diction. And when it was announced that he would become a regular correspondent of your journal, I congratulated myself that I could often repose again under his umbrageous shade. But surely, while other people have been steadily advancing, he has been content to remain stationary. Not unlike the famous Rip Van Winkle, he has slept while the "chess controversy" was raging, for he professes to be entirely ignorant of its merits, and to have scarcely glanced at it during its progress. It is far from my wish to "provoke" him into a controversy now. I have no desire to break a lance on the subject, even with so gallant an antagonist; though I can not but regret that he should have taken no interest in a discussion in which error, however popular and deeply rooted it had become, was triumphantly exposed.

Mr. A. "suggests" that chess is the original of wheat, from which the latter was derived by a long course of culture in the early ages of the world, antecedent to any record we possess. But how does he attempt to justify such a conclusion? We may readily conceive, as he justly states, that the delicious cauliflower, and the immense drumhead cabbage, are the products of the wild colewort, (*Brassica oleracea,*) obtained by judicious cultivation; and that the golden pippin is the offspring of the wild crab of Europe, not of America; for under all circumstances, and in all climates, every individual of those races retains not only its generic, but its specific characteristics. No plant deviating farther from its original than a simple *variety*, has ever been produced from either of those tribes. Wheat and chess on the contrary, are not only of different species, but of different genera. There is no more resemblance between them than there is between the chestnut and the oak. If the same connexion existed as that which is found between the various members of the cabbage or apple families, Mr. Allen's illustrations would be happy and forcible. In process of time it is possible that a race not inferior to the European may descend from the Hottentot, or even from the wretched pigmies of interior Africa; but not even those degraded specimens of humanity could ever be derived from beings a single degree lower in the scale of existence than man.

Your correspondent has also referred the origin of wheat to chess, because the wheat plant is not to be found in a wild state in any country. But are there not other plants which are only to be found in a state of cultivation? To what remote origin would he refer oats, and rye, and barley, and maize? Chess is as nearly allied to three of them as it is to wheat; and indeed it has been gravely contended that they also degenerate to chess. The parentage of the peach has also been ascribed to the almond. These and other similar metamorphoses were strenuously advocated during the pendency of the famous chess controversy; and I thought they had long since been exploded, or banished to the dim twilight of agricultural knowledge. Your correspondent would probably have scarcely ventured to evoke their aid at the present time, if he had taken any interest in that controversy; for he would not have remained ignorant of the utter discomfiture of those who attempted to force nature into a conformity with their views, instead of conforming them to the immutable laws of nature.

I repeat that I cordially concur with Mr. Allen in recommending to the farmer the utmost attention to the subject which he has brought to his notice. It is only to the unscientific, not to say absurd views, which characterize a portion of his communication, that I beg leave most respectfully, and with acknowledgments for his zeal as an agriculturist, and his ability as a writer, to object.

P.

For the American Agriculturist.

CULTURE OF SILK.

Northampton, Mass., September 6, 1843.

Dear Sir: It is gratifying that you take such favorable notice of silk culture. Our whole country should rise in its strength, and use the means with which we are so richly furnished to promote this great object. Our soil, climate, and industrious habits, are in our favor, and we may easily overcome every obstacle, which ignorance or prejudice has, or can present. Our privileges and circumstances are such, as to enable us to compete with the cheap labor of other countries, not only to supply our own market, but in due time to export to other nations, who never have, and perhaps never will raise enough of the raw material to supply their own demands; although, silk affords them the most satisfactory returns. It is gratifying to find so many leading men expressing their unqualified approbation of the importance of silk culture. Much has been said and written upon the subject, and we must begin to act more vigorously than in by-gone days, or the great object will not be accomplished; all talk and no work is not the best mode. There are thousands of hands which might be profitably employed in the culture of silk, if encouraged by those occupying the higher walks of life. Those who have made the experiment, pronounce the employment not only healthy, but agreeable; only make the business fashionable, and the desired object may be considered as more than half accomplished. The culture of silk is no new employment, even in this country. It has been attended to by a few individuals, almost ever since the country has been settled. The American culture was early begun in Georgia, and by slow progress was introduced into the middle and eastern states. The first record we have of silk-worms raised in Massachusetts, was as early as 1727; and the first garment made of American silk was in the state of Connecticut, in 1747. President Stiles of Yale College, Dr. Aspinwall of Mansfield, and Joseph Clark of Northampton, were our pioneers in this business. Mr. Clark introduced the raising of silk into this town; but not until it had been found a profitable business in Connecticut. He raised and reeled his silk, and manufactured some stout fabric, which remains to this day. The family of Mr. Starkweather, who was a native of Mansfield, brought with him the art of growing silk some fifty or sixty years since, and from year to year made sewings for his own and neighbors' use, to the amount of several dollars annually, to the year 1843; in such a silent and unobtrusive manner, as not to be noticed by any out of his immediate neighborhood. In those early days, no other mulberry than the white mulberry was used or known; but within some ten or fifteen years, other varieties have been introduced of a larger leaf, and equally adapted to the purposes of feeding worms, and facilitating the operation of gathering foliage.

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[*] The writer is in error here. Ulmus is L. F. Allen of Black Rock; the author of the article on "New Varieties of Wheat" is R. L. Allen of Buffalo.—Ed.

Taking into consideration the various uses to which the mulberry is adapted, exclusive of feeding worms, the large leaf Canton stands pre-eminent. The leaf is large, stout, heavy, comes early and retains its verdure longer, and in greater perfection than any other known variety. For the purposes of furnishing stock for the paper-mill, and furnishing numerous stalk for bark silks it has peculiar claims. The doings of the first meeting of silk-growers in New England, held in this place last year, were extensively circulated throughout the whole length and breadth of the land, and even foreign countries, and awakened an increased interest in the silk cause. Great improvements have been suggested and made within the last year; particularly the important change from close to open feeding, promoting the health of the worm, and consequently the quantity of silk.

The foliage of the mulberry has already been through the paper-mill, and submitted to the types of our presses; and more is in progress of manufacture in this place, which, if successful, will be exhibited at the Fair of the American Institute. I have several hundred pounds of foliage with and without the bark delivered at one paper-mill for experiment, and probably have enough to make 100 reams or more, from eight or ten acres of as splendid mulberries as ever a New England sun shone upon. I have a parcel of mulberry stalks under water or dew-rotting, all of the Canton variety. If this operation succeeds in facilitating the separation of the cortex from the wood, then the silk cause will flourish. But who will do the business for me another year, I know not. Past experience has convinced me that the operator must be interested to make it most profitable, and that hard labor is not the kind wanted. I have the evidence the present year, that interested labor is worth, at least, one third more, and probably, all things considered, worth double that of hired labor. The flattering accounts we have of a renewed interest in the cause of agriculture, horticulture, &c., are indicative that silk culture will not be neglected. It is hoped that the meeting of the New England silk convention on the 4th of October in this town, and the mass convention in the city of New York, will tell on the pages of history.

D. Stebbins.

The writer of the following excellent article upon preparing and packing provisions for the foreign market, making sales, &c., went out to England a short time since for the express purpose of making himself more particularly acquainted with this important branch of our trade. He has considerable experience in this business, and to any house extensively engaged in it, he could render very essential service.

For the American Agriculturist.

THE PROVISION TRADE WITH ENGLAND.

Darien, October 2, 1843.

Experience begins to show that the provision trade with England must be the great trade of the country. She must, within a very few years, draw a large share of her supply of *cured* provisions from America, and in a great degree from the United States. As the whole subject of the provision trade is new in this country, I propose to give some hints on the best method of sending out, and selling in English markets. On a former occasion, as you are aware, I published the method of curing and preparing pork and beef. The article was extensively circulated, and I trust did a good deal of service. In this article I shall confine myself principally to butter, cheese, and lard.

Butter.—Until there is more system in the method of putting up, and care in making, butter can not be sent into the English market with any degree of safety, except as grease-butter; and as that must be bought at a very low rate in your market, say upon an average of four cents, to pay the shipper a profit, it follows, that as we now do business, our butter must be consumed at home. I should not recommend any person to ship, until there is a modification of the tariff, so that butter can go in at a much smaller duty than is now levied. If our farmers would only take pains in putting up their butter, it would make a difference of a great many hundred thousand dollars with their profits. If they would work out all the milk, salt with pure salt, and put up in firkins made of thoroughly-seasoned oak, there would be no difficulty in having it keep well in any climate, and insure for it a ready sale.

Cheese.—This will soon become quite an article of traffic, and the American article may in a great measure take the lead in the English market. It is so cheaply made in our dry climate, and can be so soon cured, and sent into market, that the farmer will find it the most profitable of his dairy products. Here, however, great care is required, or he will lose. The cheese must not be too large, from 40 to 50 pounds when well cured is the favorite size, and they must be deep, mildly flavored, well pressed, and so cured as to keep their shape. A great deal of cheese is spoiled upon the voyage, simply because the whey has not all been pressed out. The hold of a ship is generally very warm, and the cheese gets heated, and unless well cured, materially injured. In preparing it for market, casks are preferable to boxes, because it will keep quite as well if properly packed, and saves expense, as each package has to be weighed into the custom-house, and it costs as much to weigh a box as a cask, besides it is easier handled in casks. In packing it into casks two things are of prime importance. 1. That all the cheese in the cask be as near alike as possible in color, taste, and weight. 2. That there should be a thin board, the size of the cheese, between each one. Half-inch would be thick enough. Some put only a narrow strip of board, but this indents itself into the cheese, and injures them. When nothing is put between them, the cheese get stuck together, and are injured in separating.

LARD.—Lard is worth so much for oil, and oil is in such good demand, that the export will cease in a short time, or nearly so. A good article of bladdered lard will generally pay. Sometimes also in kegs, and a very fair article in barrels. The bladders should be hogs' bladders, and cleaned when taken from the hog. The process is very simple. The bladder is first blown up to its utmost capacity, then turned, washed, returned, and put into a strong clear brine for twenty-four hours; changed again into fresh brine, and in about two days it will be bleached perfectly white, and the end sufficiently cured to keep after the bladder is filled. Much depends upon getting the bladder well bleached. When filled, it is turned inside out, suspended in a tub of cold water, and filled from a cask into which the lard has been strained long enough to get below the boiling point. As soon as filled it is tied up, and thrown into a large vat of cold water to cool. When put up for market, casks of the size of flax-seed tierces should be used, smaller would be preferable, and the bladders carefully packed between and among layers of clean chaff. In Ireland they use oat-hulls. Great care should be taken that they are kept dry, and do not get burst in the package. None but the very best lard should be put into bladders.

METHOD OF SELLING.—The manner of doing business now is to consign the article to some house in Liverpool. After the consignment has come to hand, it is in due time landed, weighed, &c., and taken into the custom-house if bonded, which is the usual course. The consignee employs a broker to sell. He advertises it for sale at public auction, at some future day. In due time it is put up and sold.

Some little experience in that market satisfies me such is not the best way. Nine times in ten it is in the power of a few dealers to combine and have it at their own price. Besides, the expenses are materially enhanced—because you are compelled to pay all the broker's charges extra. The true way for American dealers is to establish an agency in Liverpool or London, to whom they should send their consignments. He could push them into the market as the price would warrant, and in a very little time have his channels which would be sure and safe. Until such a thing is done, our people will do business very much to a disadvantage.

T. C. PETERS.

For the American Agriculturist.

RENSSELAER COUNTY SHOW.

Three Hills Farm, October 3, 1843.

DEAR SIR: I attended the second meeting of the Rensselaer county Agricultural Society, which took place in the village of Lansingburg on the 27th and 28th of September. The morning of the first day was cool, cloudy, and a breeze from the north rendered it rather unpropitious; but soon after 12 o'clock it cleared off, and the afternoon was clear and pleasant. At an early hour the roads leading to the village were thronged with pedestrians and vehicles of all kinds. The large number of the hardy farmers of the country, with their wives, sons, and daughters present, was evidence of the interest manifested in the fair, and a favorable omen of the future welfare and success of the society. This is as it should be; for without the aid and countenance of the practical and working farmer, these societies would avail but little. The interest of agriculturists are inseparable from the permanent prosperity of every nation, and closely connected with the welfare of every individual of the human race. On agriculture all are directly or indirectly dependant for the means of subsistence, and toward its improvement *all* should be willing to contribute.

The exhibition of stock was not what I expected; Rensselaer can do better; it was good what there was on the ground, but the number was small. Few counties in the state can show more or superior animals than Rensselaer. The town of Hoosick alone, I am confident, could make a good display in numbers as well as in quality of very superior animals of all kinds; but on looking over the list of entries, I found but *one* animal entered from that town! This is not right, it should not be so. Every farmer, and particularly every member of the society, should contribute something to the exhibition; if it is but one animal or one ear of corn, it would increase the interest, and make them, by comparison, judge of its merits. We have often heard farmers, on viewing specimens exhibited, exclaim, "Humph! I have a better animal, better cheese, or better corn, (as the case may be,) at home." Now, we ask, in the name of common sense, why do they not bring them forth, and let others know what they have got? There could be nothing lost, but something may be gained by the exhibition.

The society were much indebted to our mutual friend George Vail, Esq., and two or three other spirited individuals, for the show of cattle. Mr. Vail had twelve head of his Durhams on the ground, among which was his imported bull Duke of Wellington, whose portrait you published in the 9th No. of Vol. I. of your Agriculturist. I also found his splendid young bull Meteor there, who excited great and well-deserved admiration. He has improved wonderfully the last six months, and if exhibited at our state fair next year, will be a hard customer to beat. In fashion and general appearance, it is thought he will soon eclipse his illustrious sire, Duke of Wellington. I also recognised his imported cow Duchess, the dam of Meteor; but his two-year-old heifer Victoria, got by Wellington, dam by Coriolanus, one of my bulls, seemed to attract the most attention, and was considered the "belle" of the herd on the ground.

Next to Mr. Vail, in point of numbers, was Mr. Belden of Troy, with some fine specimens of Durhams, grades, and native cows, among which, it was remarked, were some extraordinary milkers.

Mr. J. H. Coons of Brunswick, was also there with some of his fine Durhams and though last, not least, Mr. Sampson's mammoth Durham bull who excited the wonder, if not the admiration of all, for his colossal size, being considered the largest on the ground, and only three years old. I noticed twelve yoke of very superior working cattle, and only one yoke of fat cattle on the ground.

The exhibition of sheep and swine was very limited, only eight entries of sheep, and four of swine; but though their numbers were small, they were good specimens of their kind, and reflected great credit to their owners. And "even hens," as a buxom lass exclaimed, as she passed through the crowd, "even hens are here."

The show of implements of husbandry, exceeded any county exhibition I have ever attended, and one of the most attractive and curious objects, was a structure formed of agricultural implements, denominated the "Farmer's Coat of Arms," decorated with vegetables and flowers. This you must know, was designed by that enthusiastic friend of Agriculture and Horticulture, Alexander Walsh, Esq., of Lansingburgh. I should fail in the attempt to describe this unique and beautifully designed affair, and as it was Mr. Walsh's intention to have a sketch taken of it, for engraving, I will endeavor to procure a copy for your magazine.

In the agricultural implement department, the society were much indebted to Mr. H. Warren of Troy, who was by far the greatest contributor. It was from his establishment, which, by-the-by, is the most extensive this side of New York, that the "Farmer's Coat of Arms" was formed, and the implements were much admired for the neatness and finish in their construction, and their general fitness for the objects for which they were intended. I also noticed on the ground some highly-finished Livingston county plows, made and exhibited by J. O. Dale of Lansingburgh, and Mr. Langdon of Troy exhibited some of his horse-hoes or cultivator plows. An endless chain horse-power, with a circular saw attached, was put in operation, and wood was sawed in quick time, near which were several cooking stoves in full blast, showing their capacity to consume it. M. P. Coons, Esq., of Hoosick, exhibited a model of a hinged harrow, of a new construction, which would seem, from appearance, to be a very efficient implement.

There were but few entries of household manufactures, and they were generally more for ornament than utility. The products of the dairy were good in quality, but only a few samples exhibited. The fruit and floral department was well represented. The exhibition, on the whole, was very creditable to the society and county; though we doubt not it will be far eclipsed by future exhibitions.

On the second day, which was fair and pleasant, at an early hour a procession was formed, escorted by the Troy Citizen's Corps, with an excellent band of music, to the church, where a large concourse listened with great attention to an excellent and finished address pronounced by J. J. Veelie, Esq. of Hoosick. It was expected that William P. Van Rensselaer, Esq., the President of the Society, would deliver the address, but from indisposition he was prevented, in consequence of which Mr. Veelie was appointed to take his place with only a few hours' notice for preparation. Two appropriate odes were sung; and the reading of the reports of the committees, and the delivery of the premiums, closed the exercises of the day.

C. N. Bement.

For the American Agriculturist.

THE CROPS OF WESTERN N. Y.—CATTLE, &c.

Black Rock, Aug. 28, 1843.

As the harvest season is now over, according to my promise I give you some account of it. In this region, the spring, following a winter of extraordinary intensity, was cold and backward. The growing season, however, when once commenced, came on vigorously, with showers and fine weather. The spring crops, though feeble and unpromising at first, grew rapidly with the warmth of summer, and have produced thus far, well. The weather through July and August has been uncommonly dry and hot, and never had the farmers a better hay and harvest season.

The Winter Wheat was somewhat winter killed, and smothered by the uncommon quantity of snow, but it revived beyond expectation, and with a light straw, and an unpromising yield, has far exceeded expectation. The crop is a full average, and the size, plumpness, and quality of the grain, never was better.

Of Oats, a less quantity was sown than last year, and the general growth has been less; yet they are well headed on a light and short straw. The crop a full average.

Barley is good in quality, and usual in quantity.

Indian Corn.—This is not a first-rate corn country, but with good culture, on a dry, rich, and open soil, a fair crop is usually obtained. The last six weeks have been too dry, but the extreme heat is favorable — on the whole there will be a fair crop.

Spring Wheat is grown considerably in this region, and averages well. The same remarks will apply to this as to winter wheat. Many of our farmers in this neighborhood grow the Siberian variety exclusively. It is a plump, reddish berry, on a stout and long stalk, and yields remarkably well—thirty to forty bushels to the acre is not an uncommon crop.

For **Buckwheat** the weather for some weeks has been too dry. The yield will be light, although several good pieces are seen on strong lands.

Potatoes will be light, owing to dry weather. We have had only three moderate showers in more than four weeks, and the earth is exceedingly parched. The *pastures* and mown *meadows* dried almost to a crisp. Most of them, if fired, would burn freely.

Hay has been a fair crop; about the usual average. The *quality* of it is unsurpassed.

Root Crops of the minor kind, such as *sugar-beet*, *carrot*, *ruta-baga*, &c., &c., are but so so—too drouthy. Abundant rains, if soon, may push them yet to a large yield, as they are late growers.

Cattle have generally thriven well, and are very healthy. So, generally, with other farm stock.

The Horse-Rake.—I have put up full 175 tons of hay with only a shower or two on the first cutting—at least 150 tons have been secured, part of it in stack, without a drop of rain upon it. I have also harvested 60 acres of wheat, barley, and oats, with equal success. For the first time in my farming, I have used the horse-rake in gathering barley; it succeeded admirably, and in my field labor this season, it has saved me at least fifty dollars. Although my people opposed the use of the horse-rake, fearing the meadows, most of which are of last year's seeding, were too rough and stumpy, no machine ever did better. A boy to ride the horse, with an active man to hold, will rake fit for pitching, 25 acres easily, per day; and if the bottom be smooth, no hand-raking after is required. My rake was made by an ingenious friend, at a cost of about twelve dollars, and I would not be without it for one hundred. It is the most labor-saving instrument on the farm. With 175 tons of hay, and the grain of 60 acres all snugly stored in the barn, and good stables, and sheds adjoining, to shelter the 150 head of thrifty young cattle and horses that are to winter upon it, one can think upon the coming winter with some degree of comfort.

Cattle Shelters.—I am building a large yard and shed on one end of the barn, 114 by 50 feet, rolled up of logs averaging 12 or 15 inches diameter, and 27 feet long; (we have timber cheap and plenty.) The walls are about 7 feet high, around which are made mangers, also of logs but smaller, for feeding hay, straw, &c. Sixteen feet from the outer walls all round, are crotches inserted in the ground, some 10 feet high, on which are placed poles by way of plate, and from these to the wall run other poles on rafters, about one foot apart, to the wall. This is all to be covered with coarse marsh hay and flags, of which there is plenty cut on the farm, making a warm, snug roof, impervious to rain and snow. No cheaper or warmer sheds can be invented; and in a new country the cost is literally nothing. In a prairie region such sheds are invaluable. Well chinked, they are as warm as any shed need be. As my barn was figured in Vol. I. of your paper, no further description of that is necessary. I have kept strict account of my haying, and it has averaged about 1⅛ days' labor of a man to a ton, including the horse and rake. The work, board included, 90 cents a day.

Farm-House.—I have just finished a new farm-house, of which I will send you a plan shortly. It has plenty of room for a large family; is 38 by 34 feet on the ground, 1½ stories high; a stone cellar under the whole, containing a cistern and ash-house, and with the wood-house, piazza, &c., complete, will cost about $1000. The grand difficulty with the plans of farm-houses that I find laid down in the books and papers is, that the constructors think there must be something very odd and complicated about them, or they will not take with the public, and in a great majority of cases, they sacrifice convenience to fancy. This is all wrong. I doubt very much if the old-fashioned New England farm-house of a century ago has been *much* improved upon—the *sensible* ones, I mean. There is a mighty deal of humbug now-a-days in houses as in everything else. Comfort and convenience are the main requisites, and these obtained, if the slightest good taste in architecture is used, the house will look well. Shelter and repose are the grand characteristics of the country dwelling. Secure these, and the rest will follow.

Short-Horns.—Well, I suppose I must tell you about the stock. The cattle have this season done very well. They got through the terribly severe winter better than I anticipated. All in fair condition, without the loss of a single animal, which, in so large a stock, is remarkable. Nor have I lost one since, save a diseased cow a few days ago, of some three years' ailing, with a sort of throat-cancer, or *bronchitis*, which could not be cured. The Short-Horn cows prove admirable milkers; in many instances giving more for six weeks than their calves will suck, and several of them have brought up two or three calves successively, and done it well too. It is a great and fatal mistake that many of our blood cattle-breeders make, of drying up their choice cows soon after calving, and putting their calves on foster-mothers. In thus sacrificing the milking properties of their stock, as they evidently must by such a course, for the sake of keeping them in high flesh, how do they expect the public are ever to be convinced of their valuable milking qualities, which they really do possess in an eminent degree, but which are thus kept from development? No—milk the cows to the utmost: if their flesh runs off, which it inevitably will if good milkers, give them good feed, and my word for it they will show as well as *any other cows* under the process, and to all rational eyes, all the better for their capacious udders, and full dairies.

Fine select Short-Horns, although comparatively scarce, have been extremely low, and are yet so; but they are evidently growing better. With returning prosperity, and an advance in prices of produce, they will be eagerly sought after, and a year or two hence they will bring remunerating prices. I have made several sales this season at fair rates, and have frequent inquiries for others. Let breeders recollect that *real* improvements never go back. Our agriculture is rapidly advancing; and although we have no landed aristocracy to keep up artificial prices, the private interest of the farmer will soon learn him his true policy in this particular. In a letter from a gentlemen residing in the Miami valley of Ohio, received a few days since, he remarks: "Short Horns are getting scarce, and are fast rising in value." The British markets are now open to American beef—and at fair prices too; prices which will pay the American farmer for producing it. But if we expect that John Bull is going to leave off the juicy and luscious flesh of his own noble bullocks, to batten on the miserable stuff that is usually slaughtered for *packing* beef in our own markets, we shall be most wofully mistaken. We need not expect to produce *good* beef without *good* cattle—cattle that are properly constituted anatomically—well developed in frame, muscle, limb, and kindliness to feed, which a vast proportion of our common native cattle are not. But all this we can acquire if we choose. We have the stock at hand to do it with; and when done, we can compete with English farmers in their own markets, and successfully too. But the discussion of this subject requires a well-considered essay, rather than a running sketch.

DEVONS.—A word or two about Devons. I now have about a dozen, young and old. The cows are certainly good milkers. None feed more kindly, possess more beautiful forms, or show a deeper, richer color; and for agility, they are unsurpassed. What beautiful oxen they make! so easily matched—so active and kind in the yoke; and when well grown and fatted, how they tell in the butcher's hands! Those I had from Mr. Patterson's herd last spring are beautiful. I have a six-months calf that I will show against the world—of Devons, I mean. Another year I hope to have some young Devons to spare. My little herd is finely crossed, being made up of the best late importations, on the Coke Devons of 1817, kept in all their purity. For hilly countries no cattle are superior; and they maintain at this time their superiority over all the *middle horns* of England, while their forms and milking qualities have been brought, by improved breeding, near to perfection.

BEES.—The honey bees this year have done admirably. Last year, owing to the cool and wet weather, was the poorest bee season I ever knew. Some of my neighbors, who had many swarms, did not increase their stock at all; and many of the old hives did not secure honey enough to keep them from starvation through the winter, and died. A year ago last spring, I had three swarms. One of them threw off a feeble colony, which I hived. They were busy all summer, but did not make honey enough to keep them through the winter, and although placed in a warm, dark cellar, died. During the winter one of the old swarms died also, leaving some 30 pounds of honey in the hive, so that I had but two in the spring. From these I now have eight, in all ten, and in flourishing condition too. The white clover has been unusually luxuriant this summer—the flowers abundant, and full of farina and pollen, and the bees have had a fine time of it. Never was heavier, sweeter honey than this year. Some of the young swarms have made 30 pounds in boxes, besides filling their hives with a full winter store.

I like Mr. Weeks' plan of hive as well as any. It has two apartments; a large one below for the bees to live in, and the one above for the insertion of boxes or drawers communicating with the main hive, to be filled with the surplus honey. Of the process of filling, hiving, swarming, &c., &c., there is a long story, which all who want to know about must go to the books or some experienced apiarian to learn. But I can tell the public that there is a world of humbug about these same bees. They are simply creatures of instinct, and have little intelligence or ingenuity; and everything appertaining to them must be very simple, or it only confuses and destroys them. There are too many *patent* hives; and very few of them worth much. In looking over a report of the patent office at Washington for 1842, I see that no less than 13 bee-hives are registered! I pay for no patents, nor use any; and I doubt whether a single new idea has been got out about bees that was not known to the Egyptians 4,000 years ago. To be sure there is a good deal said in the books about them, and well said too, which is very useful to the young or inexperienced apiarian; but I can learn more about bees in one long winter evening's talk by a good fire, with my friend Lathorp Cooke of Lewiston, who never wrote a bee-book, or with my neighbor Charley Hoag, the fisherman, who are both great and successful bee-masters, than from all the books I ever read; and I have read them pretty much all, from old Father Virgil, down to the last patent-right handbill.

The greatest obstacle to keeping bees is the moth. That in fact is the only bane to their existence. These may be kept away by having *perfectly tight* hives, and by *continual watchfulness*, and *in no other way whatever*. All the "patent hives," "worm extractors," and "moth repellers," are not worth a groat. I visit my hives every day, look them over carefully, and every time I see a miller, or worm, I *kill* it. In this way, and by using none but *perfectly tight* hives, with joints as close as cabinet-work, and sheltered under a good, roomy, and airy house, I keep my bees healthy and free from moths; and I can do it in no other way, nor did I ever *know* any one that did, although they *talk* about it. Bevan has written a sensible book about bees and their management—so has Weeks. But Weeks is a man of "patents." He has several of his own invention, and changes his mind too much for a steady guide.

L. F. A.

For the American Agriculturist.

AFRICAN MAIZE.

New York, October 6th, 1843.

"Lieutenant Maxwell Woodhull, a meritorious young officer of the navy, when on the coast of Africa about four years ago, purchased a small quantity of African maize. The American Institute, to whom he presented it, caused it to be planted, and some small parcels will soon be ready for distribution among our farmers. It is a nutritious grain, excellent for cattle, and will probably come into general use."

The maize above alluded to in a morning paper, promises to become an object of much interest to the farmers of this country. The officers of the American Institute are entitled to great credit for the zeal and industry they have used in introducing this grain to cultivation among our farmers. This maize is deemed so valuable that little doubt is entertained it will be found on every farm in the country in a few years. It is prolific, and a most nutritious grain, and well calculated to fatten cattle. I am but a farmer, *not a writer*, or I would say more on this interesting subject. You, sir, ever having the interest of the farmer at heart, I hope will bring this remarkable corn or maize to the notice of all agriculturists.

An Old Reader.

For the American Agriculturist.

HINTS FOR THE MANAGEMENT OF HENS.

Buffalo, October 12th, 1843.

The receipts for producing eggs are innumerable. One proposes retaining no male bird in the flock, another would have one to each half dozen hens. One requires, as the sole condition of their laying, that they be furnished with lime; a second, a warm room; a third, plenty of gravel; and a fourth, parched corn; while some would allow a nest full of eggs to lay to, others would not permit the poor biped even one she may call her own. There is scarcely anything on which there is more twattle and quackery; and to remove equally the whims and ignorance connected with it, we devote a few minutes for the purpose of partially elucidating the subject.

The hen is peculiarly an egg-producing bird. She has the same predisposition for laying, that the cow has for secreting milk. Some breeds are better adapted for this object than others; but in all that have ever come within our notice, the proper food and circumstances are alone wanting to produce a reasonable quantity of eggs. What are these requisites? Let us first inquire what it is we wish to procure, and the answer will enlighten us materially as to our first queries.

The egg consists of three distinct parts; the shell, the white, and the yolk. A good-sized egg will weigh 1,000 grains, of which about 107 are shell, 604 are white, and 289 are yolk. Of the shell, 97 per cent. is carbonate of lime, 1 per cent. phosphate of lime and magnesia, and 2 per cent. albumen. The white consists of 12 per cent. of albumen, 2.7 of mucus, 0.3 of salts, and 85 of water. The yolk has about 17.4 per cent. of albumen, 28.6 of yellow oil, 54 of water, with a trace of sulphur and phosphorus. The above are the constituents of eggs, which have been formed when the bird has free access to the various articles which constitute her natural food. But they vary with circumstances. When full fed and denied all access to lime, she will form an egg without the shell, and deliver it enclosed in the membrane or sack which always surrounds the white when covered by the shell. When scantily fed, they will frequently lay; but from a deficiency of nutriment, the egg will be meager and watery, and possess but a small portion of the nutritious qualities peculiar to them. To produce the largest number of good eggs on the least quantity of food, several things are requisite, the first of which is *an abundance of the right kind of food.* This is the most readily obtained in part from animal food. In warm weather, when they have a free range, they can generally supply their wants in the abundance of insects, earth worms, and other animal matters within their reach. How greedy do they show themselves of everything of an animal character. There is nothing scarcely of this nature they refuse, and so ravenous are they for this species of food that I have seen them fasten to the entrails of a slaughtered pig, a part of which they had swallowed, and were unable to separate it from the adhering mass; and who that has been familiar with rural scenes, has not often observed them in summer, with a snake 15 or 18 inches long squirming in their beak, or an unlucky toad, as large as one of their own eggs, dangling at legs' length in their bill, a prey to their carniverous propensities. The large proportion of albumen contained in their eggs, requires that much of their food should be highly nitrogenized, and when they can not procure this in animal matter, it must be given in grains containing it. Indian corn has but a very small proportion, yielding only about .19 per cent. of nitrogen. Oats have a much larger proportion, affording 2.2 per cent., being more than eleven times as much as corn, pound for pound. Wheat has from 2 to 3¼ per cent. Barley affords more than corn, but much less than oats. Many of the vegetables yield nitrogen in small quantities, such as potatoes, which, when boiled, are a favorite, and perhaps economical food for hens. But after supplying them with a due proportion of animal food, which, under favorable circumstances, they will procure for themselves when enjoying a good range in summer, the most economical food is oats. When wheat is grown on the premises, it is probable that is the next most economical, the much larger quantity of nitrogen contained in it, being more than a compensation for its increased price.

Hens will do much better to have a free range, as their instinct enables them to select food precisely adapted to their wants; and the exercise and rolling in the dirt are essential to their health. If confinement is necessary, in addition to the food above, they must be furnished with plenty of clean water, gravel, and lime. Gravel is necessary to grind their food, and without lime they can not form their shells; for though a small portion exists in all grains, it is not in sufficient quantity to afford the amount required for the formation of the shell. A small amount of sulphur and phosphorus is found in the egg, but this exists to a sufficient extent in their ordinary food, nearly all substances yielding a portion of each. In winter, hens should be kept warm, or they will not lay to any extent. If surrounded with a comfortable temperature, with the addition of the food above indicated, they will lay nearly all the time.

There is great economy in keeping hens where there are suitable conveniencies for them; for if furnished with plenty of proper food and a warm room, even in winter they will produce two or three times the value of their food in eggs, as they command a larger price at that time. At all other seasons when they run about, they select for themselves nearly all the food they consume, which would otherwise be of no use to their owner; nay, frequently its consumption is of positive benefit to him. Such are all insects, grubs, worms, and their larvæ, and any animal or vegetable food scattered around the premises, that would otherwise become putrid, and taint the atmosphere.

If to the usual qualities of hens, a breed of peculiar elegance, of graceful forms, and beautiful plumage, be added, together with entire adaptation to the economical purpose required, good layers and good carcase, we have a combination of utility, luxury, and taste in this bird, which should commend them as general favorites.

I will add a fact, which is not known, except, perhaps, to some of peculiarly discriminating and highly-cultivated palates, that in addition to their stronger claims on the score of beauty, the flesh of the yellow-legged is much richer, and more highly flavored, than either the white or the black-legged hens.

R. L. ALLEN.

Translated for the Gardeners' Chronicle,
from the German of Dr. Hugo Mohl.

REVIEW OF LEIBIG.

(Continued from Page 253.)

IT is, therefore, clear (continues Dr. M.,) that Leibig has completely failed to prove that plants do not use humus for their food. Besides, the question whether plants feed on organic or inorganic substances, was mooted long before the publication of Leibig's work. Although it is certain that the chief portion of plants is formed by the assimilation of inorganic substances, yet, the collateral questions, whether they receive organic as well as inorganic matter; whether all or *only some* plants require organic substances for their existence—these questions are far from an ultimate and scientifically-corroborated solution. Conclusions, moreover, merely based on uncertain observations, or made merely at random, can not be of value, and ought to have been replaced by minute and well-devised experiments. In this manner, Leibig might have become eminently useful to science. He professes (it is true) to despise minute experiments; nevertheless, the Appendix to his Work contains the reprint of some made by Hartig, which he adduced in corroboration of his doctrine. But it is unworthy of a great chemist (concludes Dr. M.) to mix up experiments of men like Davy or Saussure, with those of a gentleman like Hartig, who, we are sure, does not aim at the distinction to be considered a chemist—a science foreign to his pursuits.

The experiments which have been hitherto made relating to the question of the organic or inorganic nourishment of plants, may be divided into three Classes. 1. Plants were reared in soil destitute of humus, either with distilled water or such as contained carbonic acid. Under both these circumstances they do not prosper; still, this does not prove the necessity of organic food, because they are here equally deprived of other inorganic substances, which they are in contact with, under common circumstances. 2. Or, plants have been reared in powdered charcoal. Leibig says, (p. 58,) that they will attain in this material the most luxuriant growth, flower, and bear fruit; but he merely quotes in evidence the experiments of Lucas, reprinted in his Appendix. But the reasoning of Leibig, under this head, is illusory. Lucas speaks of *vigorous* vegetation of plants reared in a *mixture* of charcoal, powder, and decayed leaves; of such as are grown in charcoal powder alone, he merely says that they speedily become rooted. Of their further vegetation he says nothing; and it has been proved by the experiments of Zuccarini that plants will not grow at all, or very badly, in this substratum. The same is stated by Saussure (Bibl. univ. xxxvi., p. 352,) who relates, that peas reared in charcoal did not grow much better than those planted in mere sand. The third class of experiments relates to the question, whether plants will absorb organic substances dissolved in water, and especially humates; and whether they will prosper under these circumstances. The experiments of Saussure, Davy, and Sprengle, are affirmative; but Leibig has reprinted (as stated before) those of Hartig, which are *negative*. The whole question, therefore, is, to say the most of it, one yet undecided. At any rate, it can not be solved by experiments upon a single species of plants; and it is begging the question to state (p. 122) that, "All plants are the same in the chemical nature of their nutritive process."

Dr. Mohl then proceeds, at some length, to refute this unqualified assertion of Leibig. There is a considerable number, he says, of true parasites, which require for their food the juices of living plants. It can not be doubted that such plants require substances of a peculiar chemical combination and quality for their food. Many such parasites are not green, and therefore can not decompose carbonic acid, so that their food must necessarily consist of substances already assimilated by other plants, and stand in the same relation to the mother plant as the flower and fruit of other vegetables to their respective branches. Now this sort of nutrition from substances derived from living plants is also proper to a very large number of parasites (Loranthacæ) which are quite green, and therefore provided with organs for decomposing carbonic acid. Such plants are entirely similar in structure to those which grow in soil; but they must, of necessity, possess the capacity of feeding on substances already assimilated by other plants. To these *true* parasites are to be added the spurious parasites, which feed on decaying organic matter, among which some have green leaves, and others are destitute of that color. The latter can have no capacity for decomposing carbonic acid, forming organic matter from it and water. The same is also the case with many other plants of a green color, which, although they decompose carbonic acid, still are proved by their place of abode to be dependent for their food on organic matter in a state of decomposition. From this series of plants there is but a step toward those growing in peat, and heath-soil, &c. I do not mean, concludes Dr. Mohl, to prove by these statements that all plants feed on organic substances; my object is rather to explain that the introduction of organic matter into the system of vegetation is not, as Leibig asserts, necessarily detrimental to the economy of plants; and to show that it is by far preferable to have recourse to positive and precise experiments, than to indulge in groundless and general remarks and theories.

In the second chapter (*Origin and Naturé of Humus*) Leibig states, that vegetable matter is successively changed by decomposition into humus, and that it constantly forms carbonic acid with the oxygen of the atmospheric air; all which forms a constant source of nourishment for plants, which decompose both the carbonic acid taken up by the roots, and that obtained by the leaves from the air. This, says Dr. Mohl, was known long ago. New, however, most certainly, is the argumentation by which Leibig intends to prove (p. 56) that humus is unnecessary, and that plants derive their food exclusively from the atmosphere. In corroboration thereof, he adduces the antediluvian and tropical vegetation, and says of the former, that its gigantic palms, gramineæ (sic!) and ferns, could dispense altogether with soil, on account of the immense development of their foliage, as they are also distinguished from those of the present world by their scanty roots. Leibig says further, that in hot climates the succulent plants require but a slight connexion with the soil, and develop themselves without its co-operation, in proof of which he adduces the slender roots of Sedum, Cactus, and Sempervivum. Leibig believes, in fine, that in lactescent plants the humidity absorbed from the air, and indispensable to their growth, is protected from evaporation by the very nature of their sap, as humidity is surrounded by caoutchouc, and is protected by a sort of impermeable integument! *Risum teneatis amici*—exclaims Mohl, in allusion to these opinions. The assertion that antediluvian plants lived on a soil devoid of humus is so extraordinary, that Mohl refutes it at some length. We know, he says, that monocotyledonous and cryptogamic plants possess no tap-roots, but merely fibres, which, although they are slender, still are very numerous. The assertion, therefore, that plants with thick, branchy roots (like our trees) obtain their food from the soil, and those plants which possess fibrous ones are nourished by the air—is untenable. Leibig himself "considers the absorption of inorganic substances to be necessary for the nourishment of plants; those, however, can only be absorbed by the roots." "The reader," concludes Mohl, "will, I trust, not expect from me a refutation of Leibig's assertions on tropical vegetation, which are really beneath criticism. If the luxuriant vegetation of the tropics, with their virgin forests, palms, and arborescent grasses, is to be typified by a few Sedums, Cacti, or Sempervivums, and if lactescent plants are to be looked upon as surrounded by a coat of India-rubber, then, certainly, anything may be proved—and, not least, the ignorance of the propounder."

Professor Leibig's third chapter, inscribed "*The Assimilation of Hydrogen*," proves pretty well that all which chemistry has made out about chemical processes in the interior of plants amounts to almost nothing. Leibig states, in the first instance, that woody fibre consists of carbon and the component parts of water, or of carbon *plus* a certain quantity of hydrogen. Here, therefore, the very first proposition in the progress of assimilation contains an *either* and an *or*. Leibig thinks (p. 60) that decomposition of water is the more likely to take place, because water is the easier of decomposition; and this is plausible enough. But what shall we think of the consistency of Leibig, if in all other parts of his work the decomposition of carbonic acid is considered as a self-evident fact (p. 121); and leaves are said to possess powers of decomposition stronger than that of the most powerful agencies, because they can decompose carbonic acid, which resists the strongest galvanic battery! Leibig states further, that the formation of acids, of ethereal oils, (having no oxygen,) and of caoutchouc, *may be considered* as combinations of carbonic acid with water; all, or the greater part, of the oxygen having been eliminated. This may be true in a chemical point of view, but it remains to be proved that these combinations are really *formed* by water and carbonic acid, and are not the result of other organic combinations. But if the latter be the case—if ethereal oils are formed by the mutual combination of organic substances—if they exhibit certain determined stages of vegetable metamorphosis, then the decomposition of water and carbonic acid can not be taken into account, because these do not exist as such in *organic* combinations; "and then" (concludes Dr. M.) "the process to which the above substances owe their origin is a far different one, and the explanation of Leibig is anything but a formula explaining their origin;" but is quite as erroneous as the assertion would be that sugar consists of carbonic acid and spirits of wine.

In the fourth chapter, "*On the Origin and the Assimilation of Nitrogen*," Leibig starts from the correct assertion, that even in a soil richest in humus, no vegetation can take place without the co-operation of some nitrogenous substances; and that (as it has been proved by Boussingault) their nitrogen is derived from the atmosphere. But Leibig subsequently rejects the opinion (p. 65) that plants assimilate the nitrogen of the air in a direct manner, and derive their nitrogen from the ammonia contained in the rain-water, (a discovery made by himself,) adducing in proof that nitrogen is conveyed to plants in the form of ammonia, the analysis of the sap of acorns, birches, &c., in which ammoniacal salts have been found. This idea is certainly the most valuable in the whole of Leibig's work. But here, as elsewhere, he has been satisfied with generalities, without looking to details of great importance in vegetable physiology. Considering the ammonia of rain-water sufficient for explaining the amount of nitrogen contained in plants, he has entirely neglected the nitric salts, and asserts (without adducing any proof) that

Borage, the Chenopodia, and the Jerusalem artichoke, owe their nitric salts merely to ammonia—an assertion by no means confirmed by the experiments of John.

In a chapter like that "On the Origin and Assimilation of Nitrogen," it was to be presumed that Leibig would have examined the form under which ammonia is conveyed to the plants. As almost all plants grow in black mould, the relation existing between the atmospheric ammonia and the humus was to be examined—a topic interesting not only in a theoretical but practical point of view. But Leibig treats the matter very slightly, merely stating (p. 83) that humus stands in the same relation to ammonia as powdered charcoal, viz., condensing the ammonia. But we have seen already that humus can *not* be supplied by charcoal, and although the latter substance absorbs ammonia even more forcibly than humus, yet plants will not prosper in it. This, therefore, does not corroborate Leibig's assertion. The province of a true chemist, in this case, instead of being satisfied with the trivial fact that rotten wood absorbs ammonia, would have been rather to inquire whether these two substances will combine, and what combinations they will form. C. Sprengel and Mulder have lately asserted that humus and ammonia will form combinations soluble in water; Saussure also found, in all sorts of humus, a soluble nitrogenous extract, by which he explains the conveyance of nitrogen to plants. Instead of making experiments, and without even taking notice of those of such men as the above, Leibig despatches the whole question with the assertion that the humic substances contained in black mould (Damm Ere) are entirely insoluble in water.

The explanation of the action of gypsum on plants is connected by Leibig with the existence of carbonate of ammonia in the atmosphere. He assumes that gypsum is decomposed by the carbonate of ammonia of the air; and he considers it, therefore, a means of fixing ammonia, and conveying it to plants; and he adds that "This is obvious from the evident action of gypsum on the growth of grasses, and by the increased luxuriance and fertility of meadows manured with gypsum." This explanation (replies Dr. Mohl) is only true in a chemical, but not in a physiological point of view; because it is well known that gypsum is most beneficial to leguminous plants. But if its action consisted in fixing ammonia, there is no reason why it should not act beneficially on all plants, especially on corn. And although Leibig asserts the latter to be the fact, (Am. d. Chem. u. Pharm. xli. p. 369,) yet the farmers, who are pretty good judges in these matters, will not agree with the Professor. If Leibig explains in a farther part of his work the manuring influence of burnt clay and oxyde of iron by their attraction of ammonia, an influence which (he says) could not have been previously understood, it is certainly not to him that the discovery is owing, but to Sprengel, who in his "Doctrine of Manures" has also explained the influence of such substances by their attraction of ammonia.

Of the fifth chapter, headed "The Inorganic Constituents of Plants," Dr. Mohl says, that Leibig justly rejects the prevailing opinion, that the salts absorbed by plants act merely as stimulants, and is right in considering the bases absorbed from the soil as necessary constituents of vegetation. Leibig says, that all plants contain vegetable acids, which become combined with inorganic bases (or organic, formed by the plants themselves) into neutral or acid salts; that, considering the constant presence of these acids, we have to infer that they serve some vital purpose, and that their formation constitutes some necessary part of the vital process. Hence, Leibig arrives at the conclusion, that several earthy or alkaline bases can be substituted for each other in the vital process, and that the quantity of the saline bases absorbed by plants depends on the saturating capacity of the acids they contain. This (says Dr. Mohl) is the second new and important principle contained in Leibig's work. Still, it can not be considered as perfectly evident, for it is only supported by the analysis of two plants. Whether the enigma which still shrouds the absorption of inorganic substances has been thus solved Dr. M. thinks doubtful. This theory, he says, is, in this respect, one-sided—that it regards only the basal proportion of earth and alkali, and neglects the consideration of the specific proportion, which appertains to such substances in a lesser or greater degree. Many facts show that the replacing of one base by another is only possible to a certain extent; that, moreover, the same quantity of a certain base, which may be absolutely required for the prosperity of one plant, may act as a poison to another, &c. In this respect, lime more especially is conspicuous, as the flora of the calcareous Alps, compared with that of primitive rocks, clearly proves. In this respect some plants are very fastidious, and will only bear one certain sort of soil, while others grow in both. In the species which may be called *fastidious of soil*, the substitution of one base for another can not be supposed to take place.

In a subsequent part of his book, Dr. Mohl examines what Leibig has stated or retracted in his late work, "Organic Chemistry in its Relation to the Doctrines of Dr. Grubes and Sprengel." Dr. Mohl considers the explanations of Leibig in that place only as additional proofs of his inconsistency, and another sample of the uncertain style of his writings, "which leaves the reader, on almost every important topic, in perfect uncertainty what it really is that Leibig means." In only one instance, concludes Dr. Mohl, the author has spoken plainly; viz., in alluding to silica, of which he says that it is the first solid substance that is taken up by plants, and is that, moreover, whence the formation of wood takes its origin; acting, therefore, like one of those particles of a solution on which the first crystals are formed, and that in Equisetum and the Bamboo silica assumes the form and functions of the wood. This theory Dr. Mohl calls a physiological blunder, (as it certainly is,) proving Professor Leibig's absolute ignorance of everything connected with the physiology of plants.

(To be Continued.)

FOREIGN AGRICULTURAL NEWS.

By the steampackets Acadia, and Great Western, we have our files of European journals to the 23d September.

Markets.—*Ashes* had advanced, and were quite brisk. *Cotton* remained without any change, and a large business continued to be done in it till within four days' sailing of the Great Western, when the operations were less active. The last accounts from America represented the cotton crop as being rather more promising; and in consequence of this, the prevailing opinion in Liverpool seemed to be, that the price would recede a trifle. The harvest was nearly over, and the weather continued very favorable; prices of Grain and Flour, however, remained firm. *Provisions* without change, except in *Lard*, which had an upward tendency. *Money* continues very abundant.

American Stocks are firmer, and there seems to be a growing confidence in them.

Business generally in Great Britain was good, and the manufactures and all other branches of industry in full employment.

Steam Plow.—The Dumfries Courier says, that Mr. Curtis, the eminent engineer, has been completely successful with his steam plow in turning up the soft ground of Lochar Moss, and it is anticipated that he will make wheat and clover grow where hitherto there has been only worthless heather.

Ravages of Caterpillars on Gooseberry-trees may be prevented by dusting white hellebore over the leaves, at the rate of an ounce to thirty trees.

Scotch Guano.—A plentiful deposite of this rich manure, it is reported, is found on some of the northern islands of Scotland, which it is hoped will supersede that hitherto brought from the islands in the Pacific.

American Hay Rake.—We see that one of these machines was exhibited at the late Gordon Cattle Show.

Royal Agricultural Society of Ireland.—We find a full report of the third annual meeting of this society, which took place at Belfast on the 30th August; and as we have never given any notice of its proceedings, we shall devote a short space to them. England, Scotland, and Ireland, have now each a National Agricultural Society, conferring upon these countries inestimable benefits.

The Royal Agricultural Society of Ireland was instituted in 1841, and has among its members nearly the whole of the noblemen and leading gentry of Ireland. One of its chief objects is to encourage the foundation of local or district agricultural societies in different parts of the country, to enter into communication with them, and afford them aid and assistance toward improving the husbandry, farming, and breeding of cattle, and culture of land in their immediate localities. Toward accomplishing this, the council have been very successful. In 1841 only 23 local societies were in connexion with the central one. In the year after the number had increased to 53, and at present there are no less than 80 of these institutions in connexion with the central body, to all of which premiums are open at the various meetings of the society.

The entries of cattle for exhibition on the present occasion were very numerous: upward of 800 of the finest stock of all descriptions in the United Kingdom. There were no fewer than 120 bulls, some of which were of a size never seen in that part of the empire before.

The dinner was a capital affair, and it seems that the Irish, unlike us New Yorkers at Rochester, had the forethought to supply themselves with *plenty of water*.

The banquet took place in a building erected for the occasion. The pavilion, or dining hall, was one hundred and twenty feet long, by ninety-four feet wide. At each end of the building was a platform, for the president and vice president. Behind each platform was a gallery for the accommodation of ladies, sufficient to hold about three hundred and eighty. The body of the building was large enough to contain about thirteen hundred at dinner, exclusive of the platforms, which were calculated to hold seventy; so that accommodation was afforded for seventeen hundred and fifty persons. An abundant supply of water was introduced by pipes, and delivered, in the centre of every table, by means of thirty-four ornamental fountains. The hall was brilliantly lighted up by a number of handsome chandeliers.

Of the speeches, we give that of Mr. Smith, on account of its practical suggestions on thorough draining.

Mr. Smith of Deanstone said that when he had the pleasure of visiting this part of Ireland before, he had the satisfaction of delivering a single lecture on thorough draining. He now saw a plentiful harvest from the seed he had then sown. He would take the liberty of mentioning a few leading points of great importance in thorough draining. The meeting were quite aware that the soil of Ireland and the climate of Ireland were wet. They had seen how nature shows that the drier the land, the deeper and more fertile was the soil. Follow out the suggestion of nature. Some might ask, Where are the funds to be found for this? That difficulty would be easily overcome. Landlords who possessed wealth, would do the wisest thing for themselves, and for the prosperity of the country, if they would expend that capital in thoroughly improving their property, and draining. When once done, it should be done in the most permanent manner. He would say, first, do not stint the number of drains; secondly, the depth of the drain is of peculiar importance. They should be sunk at least two feet and a half even in clayey land. Thirdly, the loosening of the soil requires the force of strong horses. But whether with the plow or the spade, employment should be given to the vigorous and abundant population. Even the pick and crow-bar may be used with advantage. His friend, Mr. Wilson of the county of Clare, had brought this into a systematic form, and at the expense of about £1 per acre. He had taken advantage of the potato-furrows, and formed them into drains. The green-cropping system of agriculture is found to be of the greatest advantage in England and Scotland, and why should it not in Ireland? Farmers should make chemistry a part of their education. It would not only teach them to make application of new principles, but also to observe.—(Mr. Smith sat down amidst great applause.)

Change of the Color of Hydrangeas.—We find the following curious account in the London Gardeners' Chronicle:—

A fact has come to my knowledge which may be useful to the lovers of blue hydrangea. A lady, a friend of mine, removed some plants that had always showed pink blossoms from a former place of residence, and planted them in a bed of bog-earth. They immediately began to blow blue, and have continued to do so for the last three or four years—as fine a blue as the plant is capable of. On examining the bog-earth, I find that it is very fully charged with a yellow ochraceous matter, which I suppose to be an oxyde or a carbonate of iron, (sand, a little clay, and peat, forming the bulk of the mass.) The springs which feed the peat-bog whence the earth was taken, are strongly impregnated with sulphuret of iron, from the pyritical iron ore of the country; a smell of sulphuretted hydrogen is sometimes to be perceived about them; and I have seen sulphur sublimed among the peat-turf fires of the cottagers, who burn it. In the chemical changes which take place also among the bog where the water throws down its iron, I think it not improbable that the sulphuric acid unites itself with a portion of the aluminous matter of the clay, and the plants may thus get alum in its nascent state. But, whether it be the superabundant oxide of iron, the sulphur, or the sulphuric acid, or the aluminous compound, the fact of ferruginous peat-bog being favorable to the blueing of hydrangeas may be relied on. Perhaps it may be right to mention, that the subsoil of the above-mentioned hydrangea-beds is of a chalky nature.

Melons.—It is said that pigeon's dung is the best manure for melons, and that the Persian fruit thence derives its superiority. I am not aware that this manure has had fair, if any trial in England. In Persia, some nobles and wealthy individuals are said to keep ten, fifteen, twenty thousand pigeons, chiefly for their melon-beds. Not having been in Persia, the writer of this note can not speak from actual knowledge; but what is here stated is given on very good authority. —*E. M.* [We understand this to be the fact. It is said that small towers, with a door at the bottom by which the pigeon's dung can be cleaned out, are built in the melon-fields of Persia. No doubt Guano would have the same effect. But those melon-grounds are said to be regularly irrigated.]

Grape Wine.—I gathered my grapes one fine day, threw a bunch into a tub, and pressed out the juice with (rather an uncommon press) an old but well-cleaned cricket-bat. Each bunch was thus pressed as it was thrown into the tub, and the produce was about four gallons of juice. To this was added about fourteen pounds of loaf sugar, and about four gallons of pure pond water. I allowed the stalks and seeds to remain during the process of fermentation (which was very steady for some days); then I strained off the wine, and allowed it to remain exposed to the air for another day; and finally I put it into an eight-gallon cask, which I did not bung down for three weeks or a month afterward, when all fermentation had entirely ceased. The wine was bottled off in about ten or eleven months, and has been mistaken by experienced travellers for Moselle. Encouraged by my success, I have since made two more quantities, but I have in both instances put the wine into the cask without waiting for the fermentation: and I put into it a larger quantity of sugar; the consequence is, my wine now is like "*Champagne non mousseux.*" I may add that the strength of the wine is very considerable; it burns like brandy, particularly that made last year, in which the proportion of juice to water was as three to one. All wine-makers that I have consulted, have some nostrum or other to improve the flavor, and almost all have the notion that brandy is indispensable; but I have not used anything of the kind. The grapes I used were chiefly early white varieties, but I also used black Hamburghs, which were very far from being ripe. The time was October.

Receipt for making Grape Wine.—The Gardeners' Magazine says, take 4½ gallons water, beer measure; grapes, 5 gallons, beer measure, crushed and soaked in the water seven days; sugar, 17½ lbs., at 10½*d.* per lb. —the grapes, perhaps, 5*s.* The cask in which it was made held exactly 6¾ gallons, beer measure, and produced 34 bottles of wine clear. A bottle of the above wine kept ten years, and proved very good.

Butter without Churning.—The Stamford Mercury informs us that a cow, the property of Mr. Smith, farmer, of this place, has been regularly milked for the last twelve months, but during the last thirteen weeks, after standing for two meals as usual, the cream when taken off has changed gradually to butter, without the assistance of a churn of any description; and when made up, is considerably firmer than any other butter at this season of the year. Strange as this may appear, it is an indisputable fact.

To Prevent Cattle from Scouring.—All neat beasts have a natural tendency to scouring and flatulent disorders; it is therefore a duty of the greatest importance to farmers, to sow and plant in pastures and hedges such herbs, in proper quantities, as are found to be the best remedies for these, and such other complaints as cattle are most incident to. Among many that might be mentioned, the following are very salutary:—lovage, agrimony, carraway, and cummin.

Grazing.—If bullocks are turned to graze as soon as the grass rises in the spring, they keep the ground so bare, that, if a hot season ensues, it is burnt up, and the farmer either finds a necessity of turning them to hay a second time, or his beasts suffer for want of plenty.

Salt and Moss as Manure.—In the Farmers' Gazette we notice, that Mr. D. Blackwood has used salt at the rate of 10 bushels to 18 cart loads of moss, and 6 loads of fresh farm-yard dung, and found that this compost produced from 20 to 50 per cent. more turneps and potatoes, on the same kind of soil, than when manured with farm-yard manure alone. These experiments have been conducted since 1835, with uniform results, and they go to show, how very valuable the muck on our salt marshes would prove in a compost. Mr. Lewis makes the following remarks upon this experiment, and we beg especial attention to what he says about the salt being *decomposed.*

The above is the result of Mr. Blackwood's practice, and I can also bear testimony to the fertilizing properties of the compound, from my own experience, having this year (1840) produced from its application 15 acres of very fine turneps. In the compost which I prepared and applied, there were mixed 75 bushels of salt, or at the rate of five bushels an acre; and I remarked, after the fermentation had proceeded for some time, that the texture and nature of the compost changed, as it were, and the whole mass assumed a moist and rich appearance, which I ascribed to the operation of the salt in the mixture. I may observe, that a general want of success has hitherto attended the numerous experiments instituted upon salt for agricultural purposes, but then, these were never performed in such a manner as to prove satisfactory; for the great secret appears to lie in submitting the compost to that degree of heat which is necessary to produce fermentation; and this process should be continued for some weeks previous to the mixture being applied to the land, so that the salt may either be decomposed, or undergo some change from the fermentation, which seems necessary for developing its fertilizing properties. Now, the majority of those who have been in the practice of testing the properties of salt, have either applied it to the soil in its mineral state, or have simply diluted it with some liquid; and even when a compound was formed of earthy matters, and other substances, the salt was simply mixed with those ingredients, perhaps immediately before being applied to the land, or at all events, without any attempt being made to produce that fermentation which appears to be essentially necessary to the success of the whole operation: hence the reason why reports of experiments on the use of salt, as a manure, have hitherto been as different as the soils on which they were made. I am aware that it has been frequently asserted by learned and scientific men, that salt is only a stimulant, and possesses no nourishment, but may excite the vegetable absorbent vessels into greater action than usual. I am not prepared to controvert this assertion; but the result of several experiments would go far to establish a different view of the matter.

Liebig's Theory of the Nutrition of Plants.—Though immediately ordered, we have not yet received the pamphlet of Dr. Mohl alluded to in our July No., attacking Liebig's assertions in regard to the nutrition of plants. Instead of this, therefore, we commence a review of it from the London Gardeners' Chronicle by Prof. Lindley. It is entitled Dr. Justus Liebig in his relation to Vegetable Physiology. By Dr. Hugo Mohl. (Dr. Justus Liebig's Verhältniss zur Pflanzen-Physiologie.) Tubingen. Frues. 1843.

This is the pamphlet of Dr. Mohl to which we referred in a leading article of May the 20th, and which consists of a critique on the work of Dr. Liebig, so well known in this country under the title of "Chemistry, in its applications to Agriculture and Physiology." Dr. Mohl says that work was anxiously looked for by botanists both on account of the reputation of Liebig as a chemist, and from a knowledge of the fact that they had much to look for from the aid of chemistry in their investigation of the phenomena of the nutrition of plants. But Dr. Mohl observes that throughout the whole work there is a want of original experiment, which is the more wonderful, since it is written by the greatest experimenter of his day, and the possessor of one of the largest laboratories in Europe. Nevertheless Liebig everywhere insists on the importance of experiments, and is continually appealing to those of Theodore De Saussure. Under these circumstances, the work can only be looked upon as an attempt to construct a theory from data already known to the world.

The next general remark by Dr. Mohl refers to the style in which the book is written. If not always correct, it is energetic and clear; the thoughts are propounded in short determinate propositions, and there is not the slightest indication of doubt or uncertainty about anything; the author seems to know everything for certain, and says it boldly out. This sort of style is apt to mislead the uninitiated, and frequently leads the author himself into positive contradictions; in fact, a thing is stated to be black or white according as it suits the author's purpose. For instance, in one place he says that leaves do *not* decompose carbonic acid in the shade (in which he is wrong), and in another place he says leaves *do* decompose carbonic acid in the shade (in which he is right). Such contradictions are frequent, and prove that the author is neither well grounded in the subjects on which he has undertaken to write, nor has fully considered them. The manner in which Liebig attributes erroneous views, entertained perhaps by individual botanists, to "vegetable physiologists" and "botanists" in general, is objectionable and liable to mislead. Thus he says that "vegetable physiologists" consider humus as the principal food of plants. Now this is not true: vegetable physiologists have no sacred books in which their code of laws is contained, and if any individuals have maintained such a view, the great body has not. In fact, Ingenhousz, Senebier, Curt Sprengel, Link, and De Candolle, have all either denied it or taken other views. The doctrine of humus is altogether a chemical one, and has only been supported by chemists. Again, Liebig says that "all botanists and vegetable physiologists have doubted the assimilation of the carbon of the atmosphere by plants." Yet all books on vegetable physiology contradict such a statement; and the absorption of carbonic acid from the atmosphere is so generally admitted, that Adolphe Brongniart, in the 13th volume of the "Annales des Sciences," has even proposed to account for the excessive vegetation of the primitive world upon the supposition, that the atmosphere, at the period those plants were growing, contained a larger amount of carbonic acid in its composition than it now does. This might have been considered misrepresentation, had not Liebig in many other instances displayed an equal amount of ignorance of botanical literature and facts. As, for example, when he says that the woody fibre of lichens may be replaced by oxalate of lime, and that in equisetum and the bamboo silica assumes the form and functions of the woody bundles, and that a leaf secreting oil of lemons or oil of turpentine, has a different structure from one secreting oxalic acid.

An instance of Liebig's misrepresentation of facts occurs in his rejecting the theory of the respiration of plants. It is well known that plants absorb oxygen in the dark, and give out carbonic acid; and this has been attributed by botanists to a true process of respiration. This, Liebig thinks, betrays great ignorance on the part of botanists. He believes the giving out of the carbonic acid to be merely a mechanical process, and the absorption of oxygen to be a chemical one. He says all leaves, dead or living, absorb oxygen, and the more oil or tannic acid they possess, the more oxygen they absorb. He endeavors to prove this position by comparing, from tables made by De Saussure, the quantity of oxygen absorbed by the leaves of pinus abies, quercus robur, and populus alba, as compared with the quantity absorbed by the agave Americana. Mohl remarks on this statement, that, in the first place, the quantity of oxygen absorbed by the agave is put down at 0.3, when it ought to have been at 0.8, so as to affect the calculations very considerably; and that, in the second place, those plants in De Saussure's table which contain neither oil nor tannic acid in any quantity, as the triticum æstivum and robinia pseudacacia, are altogether omitted, although they absorbed more oxygen than those mentioned by Liebig; while the oily juniper and rue, which are also omitted, absorbed less.

Again, Liebig states on this point, that the absorption of oxygen has nothing at all to do with the processes of life. How is it, then, asks Mohl, that plants begin to be blighted when oxygen is withdrawn; that seeds will not germinate; that leaves lose their irritability; that the motions of leaves and flowers cease; that leaf-buds and flower-buds will not open when brought into an atmosphere without oxygen? But the way to settle the question of respiration would appear to be to determine whether the asserted relation between the quantity of oxygen absorbed, and the quantity of carbonic acid given out was wrong. In De Saussure's experiments, there was found to be an exact relation in all cases. This would not be the case, were Liebig's theory of the origin of the carbonic acid correct.

These few general remarks, observes Dr. Mohl, will serve to indicate the claim of Liebig to become a reformer of botanical science.

The next part of Dr. Mohl's observations relates to the chapters of Professor Liebig's book, inscribed "The Assimilation of Carbon." The question at issue is whether the plants owe their carbon to the absorption of organic or inorganic substances, Professor Liebig having given his sanction to the latter opinion. The reasons which seem to have weighed most with him are, 1st, Humic acid loses its soluble character by exsication as well as by freezing; 2d, Even conceding that all the bases found in the ashes of plants should have been conveyed to their substance in the form of humates, yet the amount of humic acid thus conveyed to plants is not sufficient to explain the amount of carbon they contain; moreover, 3d, Even all the rain which falls on a certain area, is not sufficient to explain the large quantity of carbon they contain. But the chief argument against the plants deriving carbon from humus is, 4th, That manured and barren ground will yield nearly the same amount of carbon in the plants growing thereon. It is, in fine, to be observed, that 5th, Humus and the carbon of plants must have the same origin, as it is impossible that there could have existed any primitive humus, for plants must have existed before humus. Plants receive, therefore, their carbon from the atmosphere, where it exists in sufficient quantity to supply all plants with carbon. Dr. Mohl says, then, that Liebig *has* arrived, in these remarks, at one or two results correct in the main; but he also shows that most of it (or at least as much as is *true*) has been known to Saussure 40 years ago. As the above axiom, however, is one of great importance in botanical physiology, Dr. Mohl proceeds to examine the doctrine of Liebig in detail. The argument stated under No. 1 proves, he says, nothing, because the combination of humic acid with alkalies, stated under No. 2, is in direct contradiction to it. These parts of the question have been, however, already sifted by Schleiden; and the utmost which can be conceded is, that plants do not obtain *all* their carbon from the soil.

Liebig concludes one of his remarks relating to humus in the following words:—"As plants grown on an acre of unmanured meadow or forest land will assimilate an equal amount of carbon to those grown on manured and cultivated fields,—as, moreover, the former soil will not become, by the process of vegetation, poorer in humus, but on the contrary, richer; there must be a source different from humus or manure, whence plants receive their carbon, and this is the atmosphere." This mistaken argument of Liebig (says Dr. Mohl), arises out of his confounding the origin of carbon, in the whole of vegetation, with that in a single plant, as well as on his placing unmanured soil on a par with that which is deficient in humus. A plant might require a certain amount of humus for its nourishment, and still prepare and yield, by the decay of its foliage or herbage, the same quantity, or even more than it has absorbed, for the growth of subsequent generations.

The next argument of Liebig discussed by Dr. Mohl (relating always to the origin of carbon in plants), is that in antediluvian times, plants must have existed before humus; and so they do now—witness the lecanoras and parmelias growing on the perpendicular cliffs of granite mountains. This reminds him of the question, whether the egg or the hen existed first; and being aware of the abuse which has of late been made of scientific axioms being derived from mere algebraic calculations, he says that all sorts of results may be ex-calculated (herausrechnen) in that way.

To settle the question about the existence of primeval humus, Dr. Mohl makes the following remark on antediluvian vegetation. "What do we know of the incipient vegetation of the primeval world? and why, before the appearance of the highest developed plants such for instance as ferns, should not others which can live without humus, such as mosses and lichens, have prepared the humus necessary for the higher plants?" This, of course, is the eternal progress of vegetation in all times and in every place of the globe.

[Continued on page 248.]

Editor's Table.

THE FARMERS' MINE, OR SOURCE OF WEALTH.—The Albany Cultivator, in noticing this work in its October No., accuses the editor, Mr. Heermance, of "gross plagiarism" in compiling it, merely because he did not put quotation-marks to every extract, or mention the author's name from whom he quoted when doing so. Mr. H., in his preface, acknowledges that the work is a compilation, and also gives the names of the persons from whom he has made his principal extracts. In his copy he had marked all these extracts with quotations; but when the work was read in proof, the proof-reader, according to the *general usage* of publishers, after the acknowledgments of Mr. H. in his preface, said they should be struck out, and accordingly did it; so that if there be any blame in this matter, it can not be attached to Mr. Heermance. Mr. Gaylord's name, about the omission of which the Cultivator complains so much, is repeatedly mentioned in the extracts from his essay in the body of the work—quite enough we should suppose to satisfy any reasonable man; and if he penned the article in the Cultivator on this subject, he only shows his ignorance of general usage among printers. Neither Mr. Heermance, nor any one else, wishes to rob him of one iota of what may be his due. But if tried by his own rule here laid down in the Cultivator, a "grosser plagiarist" than himself does not exist; for there is scarcely an idea in his Essay on Manures, which has not been taken from Davy, Liebig, Johnstone, Dana, and other writers. We do not see a single experiment detailed there as made by himself, nor do we find one single new principle illustrated. The whole merit of his essay consists in his putting the substance of others' knowledge into a compact, popular form. Now we do not mention this for the purpose of finding fault with Mr. Gaylord, or detracting from his performance, for his essay is a clever paper enough, and was worthy the prize awarded to it; we only advert to it in order to show him how easily he may be retorted upon, tried by the rules he is pleased to lay down for the guidance of others; and this *revamping* other people's ideas is pretty generally characteristic of his editorials. But new ideas are not often to be looked for in these matters, and an editor may consider himself fortunate, who embodies the knowledge of the day in the most agreeable manner for the popular mind. For our own part, we can scarcely lay claim to even this merit. The Cultivator seems to look upon the introduction of the name of the American Agriculturist into the Farmers' Mine with a very jaundiced eye, and we suspect that *this* is Mr. Heermance's *principal offence*. Had the name of the Cultivator been introduced instead of that of this journal, its notice of the work would probably have been in a very different style. We are really sorry that the Cultivator could not have been so much obliged.

A TREATISE ON FOOD AND DIET, with observations on the Dietetical Regimen suited for Disordered States of the Digestive Organs; and an account of the Dietaries of some of the principal metropolitan and other establishments for paupers, lunatics, criminals, children, the sick, &c., by Jonathan Pereira, M. D., &c., Licentiate of the Royal College of Physicians in London; edited by Charles A. Lee. New York, J. & H. G. Langley, 57 Chatham street. The title above indicates the nature of the book, and we need only add, that it is considered a standard authority, and the most able and complete work ever published on Food and Diet. It makes a book of 325 pages large octavo, price $1. No family should be without the work.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, OCTOBER 16, 1843.

ASHES, Pots,	per 100 lbs.	$4 50	to	$4 62
Pearls,	do.	5 25	“	5 38
BACON SIDES, Smoked,	per lb.	4½	“	5½
In pickle	do.	5	“	5½
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	23 00	“	24 50
BARLEY	per bush.	44	“	50
BEANS, White	do.	1 12½	“	1 25
BEEF, Mess	per bbl.	6 50	“	7 50
Prime	do.	4 50	“	5 50
Smoked	per lb.	7	“	7½
Rounds, in pickle	do.	4	“	5½
BEESWAX, Am. Yellow	do.	28	“	30
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	12	“	15
Shipping	do.	6	“	10
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	32	“	38
Stearic	do.	20	“	25
CHEESE	do.	4	“	7
CIDER BRANDY, Eastern	per gal.	35	“	40
Western	do.	28	“	35
CLOVER SEED	per lb.	7½	“	8½
COAL, Anthracite	2000 lbs.	4 75	“	5 50
Sidney and Pictou	per chal.	8 00	“	8 25
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	52	“	53
Southern	do.	51	“	52
COTTON	per lb.	6	“	11
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	15	“	16
FEATHERS	per lb.	29	“	33
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush	9 00	“	9 50
clean	do.	— —	“	— —
FLOUR, Northern and Western	per bbl.	4 44	“	4 75
Fancy	do.	5 50	“	5 62½
Southern	per bbl.	4 25	“	4 75
Richmond City Mills	do.	5 75	“	— —
Rye	do.	2 87	“	3 12
HAMS, Smoked	per lb.	5	“	7½
Pickled	do.	4	“	5
HAY	per 100 lbs.	35	“	40
HIDES, Dry Southern	per lb.	10	“	11
HEMP, Russia, clean	per ton.	180 00	“	185 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	7	“	10
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	8
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 81	“	3 00
Corn	per hhd.	13 00	“	13 50
MOLASSES, New Orleans	per gal.	25	“	27
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	25	“	27
Southern	do.	21	“	23
OIL, Linseed, American	per gal.	75	“	80
Castor	do.	90	“	95
Lard	do.	55	“	65
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 00	“	2 25
Ground, in bbls	per cwt.	50	“	— —
PORK, Mess	per bbl.	10 00	“	11 00
Prime	do.	9 25	“	10 12
RICE	per 100 lbs.	2 50	“	3 00
ROSIN	per bbl.	65	“	1 00
RYE	per bush.	63	“	65
SALT	per sack	1 35	“	1 50
SHOULDERS, Smoked	per lb.	3	“	4½
Pickled	do.	3	“	4
SPIRITS TURPENTINE, Southern	per gal.	38	“	40
SUGAR, New Orleans	per lb.	6	“	7
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	7	“	7½
TAR	per bbl.	1 38	“	1 75
TIMOTHY SEED	per 7 bush.	14 00	“	16 00
TOBACCO	per lb.	3	“	7
TURPENTINE	per bbl.	2 37	“	2 62
WHEAT, Western	per bush.	92	“	96
Southern	do.	86	“	92
WHISKEY, American	per gal.	23	“	25
WOOL, Saxony	per lb.	35	“	50
Merino	do.	30	“	35
Half-blood	do.	25	“	27
Common	do.	18	“	22

New York Cattle Market—October 16.

At market, 950 beef Cattle, (300 from the south) 25 Cows and Calves, and 3,000 Sheep and Lambs.

PRICES.—*Beef Cattle* do not vary from last week, and we quote to correspond, viz: $3 50 to $5 50 for retailing qualities. 100 unsold, and 20 taken for Bermuda.

Cows and Calves.—All taken at $18 *a* $26.

Sheep and Lambs.—Sales of 2,700 at $1 12½ *a* $3 for Sheep, and $1 *a* $2 37½ for Lambs.

REMARKS. *Ashes*, are in fair demand. *Coal* in great request. *Cotton* is quite dull, and neither buyer nor seller seems disposed to operate. Our next advices from Europe will probably affect the market, though in which way we hardly dare anticipate—we hope favorably, however. Export from the United States since 1st September last, 7,342 bales; same time last year, 15,898; same time year before, 21,673. *Flour* and *Wheat* are somewhat in demand, and at a trifle better prices; still, we can not expect much higher rates to rule for the coming season. *Corn*, *Rye*, and *Oats*, in fair request. *Hay* is shipping in pretty large quantities. *Hops* are very dull and depressed. *Molasses* the same. *New Beef* is coming in largely, and sells well. *Pork*, the prices rather unsettled. *Rice* and *Sugar* quite active. *Tobacco* not so firm.

Stocks of a permanent kind continue without change, while there is plenty of gambling in the fancy kind.

Money is abundant at advancing rates. Good paper can not be done for less than 4 to 5 per cent., and as many goods are now sold on long credits, we are of opinion it will soon still further advance. It is worth 6 to 7 per cent. on bond and mortgage, and difficult to be obtained. In other matters we have nothing of especial interest to remark.

BLACK GALLOWAY CATTLE.

A pure-bred imported cow, and a bull of the Galloway or Kyloe breed of Scotch Highland cattle, are for sale in this vicinity. These animals are very fine of their kind, and were chosen from one of the most celebrated breeders of this stock in Scotland. The cow took several prizes at the agricultural shows before being shipped to this country, and gives a superior quality of milk. The bull is quite equal to the cow, and they will be sold at a reasonable price.

Apply, post paid, to the Editor of this paper.

A STOCK MAN WANTED TO GO SOUTH.

A planter, in the state of Georgia, wishes to engage a faithful competent man to take charge of his stock. If he be married, and his wife be a good dairywoman, she will also find employment. The situation is in the interior of the country, and *quite healthy*. None need apply if above middle age, or who have not had some experience in their business in this country, and can bring the best of references.

Address the Editor of this paper.

SOUTH-DOWN SHEEP FOR SALE.

Having, with my son, concluded to visit England, and perhaps France and Germany, with a view of becoming, by personal observation, better acquainted with the great agricultural improvements of the day, as well as more especially to examine our own favorite departments of Stock, Stock-breeding, and Stock-growing, we have concluded to dispose of the principal part of our South-Down flock, consisting of ewes, lambs, and bucks—all of which are bred exclusively from the Glynde and Babraham flocks of John Ellman, Esq., and Jonas Webb, Esq., in England. More than this need not be said for their purity of blood, and excellence of descent.

The flock is in the most perfect health, and we think it will be conceded, when seen, that the produce is in no way inferior to the imported sheep; but it was advisable to sell them, that the farm should not become overstocked during our absence.

Mr. Thomas Hollis of Gilbertsville, Butternuts, will take charge, and make sale of the sheep, on the ground selected for the Agricultural Exhibition of the American Institute, to be held in New York on the 18th and 19th of October, when the flock will be exhibited, and sold without reserve.

FRANCIS ROTCH.

Butternuts, Otsego co. N. Y., Sept. 12th, 1843.

FARM TO LET.

Wanted to let on shares a Farm of 480 acres, 80 of which are well fenced and under good cultivation. It is well stocked with horned cattle and horses, and has a good supply of farming utensils, a two-story frame house, and large barn. The land is of the best quality, and well watered by two never-failing streams. It lies in a perfectly healthy region, on a high rolling prairie, 18 miles from Springfield, the capital of the State, and 35 miles from Pekin, on the river Illinois. The person making application for it must be a man of family, possess some capital, and give satisfactory reference as to character.

Apply *post paid* to the Editor of this paper, 205 Broadway New York. 1t

STOCK FOR SALE.

R. H. Hendrickson & Co., of Middletown, Butler county, Ohio, will promptly attend to orders for Short-Horn Cattle, Bakewell, Merino, South-Down, and Saxon Sheep; also for Berkshire pigs from Windsor Castle, imported from England, and twenty choice Berkshire sows, a part of which were also imported. Windsor Castle stands 3 feet high, and is estimated by competent judges to weigh 1000 lbs. Pigs of crosses with the imported Kenilworth, the large Miami, Byfield, and Grazier stocks, will likewise be furnished.

None but choice specimens of any of the above stock will be supplied, and at prices corresponding with the times. Address, post paid, as above.

R. H. HENDRICKSON & Co.

Oct. 12th, 1843.

SOUTH-DOWN AND LONG-WOOLLED SHEEP FOR SALE.

Will be sold at Auction on Monday the 23d of October next, at 11 o'clock A. M., at Coldenham, 8¼ miles west of Newburgh, about 70 head of South-Down Sheep, consisting of Bucks, Ewes, and Lambs. They are all bred from stock selected from the most celebrated flocks in Sussex, England, and imported by the subscribers.

Also 30 head of choice Long-Woolled Sheep, several of them imported.

S. & J. WAIT.

Coldenham, August 24, 1843. 2t

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Saxton & Miles, Publishers, and dealers in Books in every department of Literature, at very reduced prices for *cash*.

S. & M. publish the following Book, which should be in every family in the United States: GUNN'S DOMESTIC MEDICINE, or the Poor Man's Friend.

Among the many publications of more than doubtful utility, with which our presses groan, it is pleasant to offer to the public one which, while it can not injure the mental and moral powers, is capable of improving our health and prolonging our days. It is now about ten years since this work was first published, since which time it has passed through many large editions, and the astonishing number of *one hundred thousand* copies has been sold in the southern and western states, and the demand is increasing.

It has just been revised and corrected, containing 900 pages, and executed in superior style. People may be disposed to smile when we tell them that they can save money by purchasing this book, but we think we can satisfy them that such is the fact. In every family more or less is paid yearly for doctor's bills. A child is taken with a fever, or some other complaint, and from ignorance nothing is or can be done effectually to check it. The physician is called, and a large bill is contracted; whereas, had GUNN'S DOMESTIC MEDICINE been on hand, a remedy could easily have been found which would have checked the disease in its first stage, and not only have saved the purse, but perhaps the life.

AGRICULTURAL INSTITUTE,

BRIDGEPORT, CONNECTICUT.

The Rev. B. G. Noble proposes to establish an Agricultural Institute, on his Farm in the town of Bridgeport, Connecticut. The Location is on the east bank of the harbor, within a few minutes walk of the churches, surrounded by agreeable rural scenery.

The full course of instruction will embrace the natural sciences, with their application to agriculture, and all the branches of a finished English education.

The winter term will commence on the first Wednesday of October, and the summer term on the first Wednesday of May. The spring and autumn vacations will be each four weeks.

EXPENSES.· For Board, Tuition, Washing, and Fuel, will be for each term of twenty-two weeks, $80.

Payment to be made for each term in advance.

The pupil should be provided bed and bedding. Application to be made to the Rev. B. G. Noble, Bridgeport, Connecticut, or to the Editor of the American Agriculturist. 2t

American Agriculturist Almanac for 1844.

This work comprises 64 pages, double columns octavo, with numerous wood cuts, price $8 per hundred, 12½ cents each. In the contents will be found—Agricultural Statistics of the United States—Aspects and Nodes—Astronomical Calendars for Montreal, Boston, New York, Philadelphia, Charleston, and New Orleans—Characters and Names of the Planets, &c.—Farmers' Northern Calendars, with particular directions for the management of the Farm, Cattle, Fruit and Flower Garden, &c.—Southern Calendars for the Planter and Farmer, with explicit directions for the culture and harvesting of Cotton, Rice, Tobacco, &c., &c.

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Superior cows and great milkers, of the Ayrshire and Yorkshire stock, recently imported from Scotland and England, can be had on reasonable terms. They are in the vicinity of this city, and can be seen any time, upon a few hours' notice.

Apply, post paid, to the Editor of this paper.

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BUSINESS AGENCY.

The Subscriber will attend promptly to the execution of all orders for the purchase of stock, agricultural implements, or merchandise of any kind; also the negotiation of loans, sales of lands, payment of taxes, &c. He has been more or less engaged in mercantile pursuits in this city for ten years, and has an extensive acquaintance with moneyed men, and a thorough knowledge of business in general. Cash or produce must invariably be in hand, before orders for purchases can be executed.

A. B. ALLEN.

205 Broadway, New York.

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. II. NEW YORK, NOVEMBER, 1843. NO. IX.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

SIXTEENTH ANNUAL SHOW OF THE AMERICAN INSTITUTE.

In accordance with its programme, the show of this great National Society was opened at Niblo's spacious saloon and garden in Broadway, on Tuesday the 10th October, for the exhibition of Manufactured Articles, Vegetables, Seeds, Fruits, Flowers, Dairy Products, &c., &c., and continued seventeen days. The daily concourse of visiters to the show evinced an unflagging interest on the part of the public in these matters, and we are told, notwithstanding an increase of free tickets issued, that more money has been taken the present year than ever before. Bands of music or a choir of singers were in attendance most of the time during the day, to give greater variety to the scene, and in the evening, fire-works were at play to add to the dazzling brilliancy of the illuminated display. In addition to these, for the entertainment of the graver part of the community, addresses of a highly instructive kind were delivered almost every evening, by eminent men from different parts of the Union, on subjects appropriate to the occasion.

Manufactured Articles.—In these generally we noticed an improvement, especially in Silk Fabrics, India Rubber Goods, Cutlery, and light Iron Furniture; these, however, not particularly concerning agriculture, we must leave our readers in want of more information respecting them, to seek it in the full reports of the committees of the Institute on these subjects.

Agricultulal Implements.—The show in these was moderate, but most of them were good of their kind. Among the new things which more particularly attracted our attention, were a Potato-Digger; a Dog-Power Machine for churning, as figured page 272 of this No.; a Single Horse-Power; an Ox-Yoke with bow-spring instead of the common key; a Subsoil Plow, (price $10,) cheap and effectual; Three-share Cultivators, stirring the earth effectually in the centre of the row with the middle share, and throwing the dirt to the right and left with the hind shares like a small plow; Three-share Plows, turning three light furrows at a time; and an improved Fanning-Mill. There were many other instruments, some with new improvements, which we thought well of, but as we had no opportunity of testing their merits, we shall defer saying more till we can inspect the reports of the committees on these subjects.

Vegetables.—Here was a good display, especially of several new kinds of seedling Potatoes, and other roots of which we think highly. Some of these were of monstrous growth, especially the Roots and Squashes. A Chinese Pumpkin of a curious rag-wheel shape weighed 118 pounds; and Egg-Plants we saw nearly as large as our hat-crown.

GRAIN.—The Cereal display, we must confess, with the exception of Indian and Egyptian corn, was meager enough. Some ears of the former we measured were 15 inches long, of the grain part; and others were of great circumference, and showed as high as twenty-one rows, which is rather extraordinary for northern corn. The seed of the Egyptian Corn is something like Broom Corn; the stalks are said by those who have tried it, to be admirably adapted for summer soiling.

FRUITS.—Here was a very good show indeed, with the exception of Peaches, it being passed the season for these. A Bell Pear was exhibited measuring 18½ inches round, and weighing 33 ounces; Apples 18½ ounces each; and Chinese and other Quinces of great size. There was quite a variety of grapes, and good of their kind; Spanish Chestnuts four times the size of the common American, and various other things of which we shall make due mention hereafter.

FLOWERS.—It was so late in the season that we could not expect a great display of these; there were, however, a few large bouquets, beautifully made up from quite a variety of flowers. The Dahlias were in great profusion, and a superb show. There were some new seedlings exhibited which struck us as perfect in form, shape, and color.

DAIRY PRODUCTS.—In Cheese there was a goodly show, some immensely large, weighing nearly 200 pounds. Of Butter there was a less quantity, though the quality seemed unexceptionable.

PLOWING-MATCH.

This came off on Monday the 16th October, within a mile of the flourishing town of Paterson, N. J., to and from which a special train of cars was furnished gratis by the liberality of the Railroad Company, for the members of the Institute, all invited guests, and the instruments of husbandry.

At 10 o'clock, A. M., a large company was taken up at the station-house at Jersey City, among whom we noticed several distinguished strangers, the Marquis de Cadenas and others from Cuba; Cols. Bankhead and Cross, with other officers of the United States Army; Commodore Dekay and Captain Reed of the Navy; together with General Fairbanks, and quite a party of gentlemen from Boston, &c., &c. The fine bands from the Second Regiment of Artillery, and the ship of the line North Carolina, were in attendance, and played alternately upon the occasion. As we rolled into Paterson, a peal of cannon saluted us, and we found a numerous assembly of Jerseymen waiting our arrival at the depot. A long procession was now formed, and with the banners of the Institute floating in the air at the head of it, and the inspiring strains of the bands, we marched through the streets in double file to the Passaic Hotel.

Here the officers of the day were chosen as follows:—

General Johnson of Brooklyn, N. Y., *President;* Andrew Parsons, of N. J., Philip Schuyler, of N. Y., William Condell, of Paterson, N. J., James Tallmadge, N. Y., James Clowes, N. J., Adoniram Chandler, N. Y., Edward Clark, N. Y., Abraham Godwin, of Paterson, George C. Dekay, Hudson Co., N. J., James L. Morris, Essex Co., N. J., Philemon Dickerson, Passaic Co., N. J., John O. Choules, Mass., Stephen Fairbanks, Mass., *Vice Presidents;* Henry Meigs, of New York, *Secretary;* Edward N. Dickerson, of Paterson, *Assistant Secretary.*

The following gentlemen were appointed judges of the Plowing: Messrs. Johnson, Schuyler, and J. D. Ward.

The several Vice Presidents were made Marshals of the day under the direction of General Godwin, one of their number.

These proceedings being over, and the plows not yet quite ready to start, most of the company now took the opportunity of visiting the Falls. The weather was delightful, and the river appeared to great advantage, rushing in a bold sliding leap down a chasm of about 70 feet. From these precipices it is well known the lamented Mrs. Cummings was precipitated below in the most unaccountable manner to certain destruction; here, also, the renowned Sam Patch first took his initiatory leaps, which finally ended in his death. The scenery around is wild and romantic, and well worthy of being visited. But the Plowing-Match being the grand event, after a hasty view of the Falls and the delightful grounds around, we hastened to the field of strife about a mile distant.

Arrived on the ground, General Johnson called the assembly to order, when fifteen plows were entered. The soil was of a rich gravelly loam, in sod, and well calculated to test the merits of the plows. Previous however to starting on their match, Mr. Teschemaker of Boston delivered a capital address of about fifteen minutes duration, which was listened to with interest, and roundly plauded. The bands now struck up an enliven-march, and everything being ready, away the teams started at a rapid rate. The task was one eighth of an acre, to be done within an hour. It was a pretty close contest. A splendid pair of brindle cattle, however, driven by the plowman, accomplished the task first, having done it in 19 minutes. We must confess this rather surprised us, for we had no idea that horses could so easily be beaten in the quickness of pace. The cattle were loudly cheered on finishing their last furrow, and did not seem to be worried at all with the feat, but looked up quite honestly, as much as to say, "Gentlemen, that can easily be beaten when we will." After this the plows were tested by the dynamometer. That of the least draught showed 350 pounds, while the one of the greatest indicated 600 pounds.

The first premium, a silver cup, was awarded to Mr. Cornelius Van Winkle of Paterson, who used Eastman's plow of Baltimore. It was drawn by the brindle cattle above. We did not learn whether he was a descendant of the renowned *Rip*, but if so, he proved himself anything than *very sleepy* on the occasion. The award was not so much for the quickness of time, as it was for the perfect manner of the work. He, however, had some advantage in the soil; *his* part of the field being the lightest and dryest, and the sod not of so thick and firm a texture.

The second premium of a silver medal, was given to William Clowes of New Jersey—a Bergen plow.

The third premium, a diploma, to John Swan—also a Bergen plow.

As we know many persons will be interested in this plowing-match, and wish to learn all the particulars of the working of the plows, &c., at our request, Mr. E. Cornell, a practical mechanic and farmer, has been so obliging as to make us out the following report. We have every confidence in his opinion, as he has given the subject of plows and plowing his particular attention for several years past.

The first on my list is the Bergen plow, dimensions as follows: length of beam forward of the standard, 3 feet 7 inches; length from point to heel of mould-board, 3 feet 5 inches; length of landside, 2 feet 7 inches; width of cut, 9¼ inches; width of heel, 8½ inches. This plow has a good shaped mould-board for ease of draught, but is slender back of the point, and would be liable to break in rough grounds. It plowed its land with 23 furrows, about 5½ to 6 inches deep—the furrows turned smooth, and slightly lapped. It took the third premium. Trial with dynamometer, draught 350 pounds; furrow 6 inches deep, 12 inches wide; soil a light gravelly loam.

Second, Wisconsin plow, from Peekskill, No. 29. Length of beam forward of standard, 4 feet; length from point to heel of mould-board, 3 feet 2½ inches; length of landside, 2 feet 5 inches; width of cut, 11½ inches; width of heel 9 inches. This plow has a good-shaped mould-board for sward plowing, and performed its work with 19 furrows, 6 inches deep; furrow turned smooth, and in a handsome manner, slightly lapped, and very little broken. Trial with dynamometer, draught 450 pounds; furrow 12 inches wide, 6 inches deep.

Wisconsin plow No. 28½. Length of beam 4 feet; length from point to heel, 3 feet 1 inch; length of landside, 2 feet 5 inches; width of cut, 10¾ inches; width of heel, 9 inches; work performed with 22 furrows, 5 inches deep, well turned, slightly lapped. Trial with dynamometer, draught 450 pounds; furrow 12 inches wide, 5 inches deep; two other furrows, one 4½ inches deep, another 6 inches deep, 12 inches wide.

Fourth, the Morris plow, from Bloomfield, Essex county, N. J. Length of beam, 4 feet 2 inches; length from point to heel of mould-board, 3 feet 5 inches; length of landside, 2 feet 8 inches; width of cut, 9½ inches; width of heel, 10½ inches; good-shaped mould board. This plow performed its work of 17 furrows, 6 inches deep; furrows well turned, and matched pretty well for a new and rough plow. Trial with dynamometer, draught 600 pounds; furrows 12 inches wide—part of them 5 inches, the other part 6 inches deep.

Fifth, the Scotch plow, all iron, dimensions not taken; work performed with 25 furrows, 6 inches deep, lapped strong at an angle of about 50 degrees; turned smooth. Trial with dynamometer, furrows 12 inches wide, 6½ deep; draught 500 pounds.

Sixth, the Conklin plow from Peekskill. This was a new plow, untried. Length of beam, 3 feet 11 inches; length from point to heel of mould-board, 3 feet 2½ inches; length of landside, 2 feet 5 inches; width of cut, 8½ inches; width of heel, 9½ inches; mould-board very twisting; landside falling over on the land at an angle of about 10 degrees; cast-iron cutter attached to the point, corresponding with the angle of the landside. Work performed with 18 furrows, as near as I could count them, about 5 inches deep. The quality of the work I believe answered the expectations of all but the owner of the plow. I hope his exertions may meet with better success at another trial. The land allotted for this and the Geneva plows was stony and rough, giving the other plows a decided advantage over them.

Seventh, the Wheel plow, from Geneva, N. Y. Length of beam, 3 feet 7 inches; length from point to heel of mould-board, 3 feet ½ inch. No regular landside: has a wheel about 1 foot in diameter, which is designed to substitute the landside and lessen the friction. Cut, 9 inches; width of heel, 8¼ inches. This plow performed its work in a very bad manner, with 21 furrows, 7 inches deep. The mould-board is in good shape; the defect is in the want of a landside, for which the wheel is a poor substitute. Trial with dynamometer, draught 500 pounds; furrow 6 inches deep, 12 inches wide.

Eighth, Eastman's Self-Sharpener, No. 10. Length of beam, 3½ feet; length from point to heel of mould-board, 3 feet ½ inch; length of land-side, 2 feet 1 inch; width of cut, 11 inches; width of heel, 10 inches. This plow performed its work with 22 furrows, 5½ inches deep. Soil, gravelly loam, with very little sward. The mould-board being short and turning quick, gave the work the appearance of old ground or stubble plowing. This plow took the first premium for the best plowing. Trial with dynamometer, draught 450 pounds; furrows 5½ inches deep, and 12 inches wide.

The plow that took the second premium for best plowing was one of Bergen model; for description of which see Bergen plow. Trial with dynamometer, 400 lbs.; furrows 6½ inches deep, and 12 inches wide. The land on which this plow worked was gravelly, with but little sward. In a strong sward and heavy soil, it would make handsomer work than the plow that took the first premium.

There were two plows exhibited by Mr. Finch, of Peekskill, N. Y. Very good models, strongly made, and well finished. I am sorry to find that I have not the dimensions of them. The work of No. C, was performed with 20 furrows, 6 inches deep, lapped very little, and well turned. Trial with dynamometer, draught 450 lbs.; furrows 6½ inches deep, and 14 inches wide. After measuring the width of furrow for each plow separately, I found the result as above given. I then measured the 12 furrows together, and found them to measure 12 feet and 3 inches, varying but 1 inch in the 12 furrows for the measurement as taken separately.

There was one of Prouty & Mears' central draught-plows on the ground (sod C), and I am very sorry that it was not put to work, as it is a favorite plow at the east, and hard to beat anywhere. I think it is better adapted for all kinds of soil, rough and smooth, stony and free, than either of the plows which took premiums. Its dimensions are, length of beam, 4 feet; length from point to heel of mould-board, 3 feet ½ inch; width of cut, 11½ inches; width of heel, 11 inches.

I saw one of the Livingston county plows at Niblo's, but it was not taken over to Paterson. It is a favorite plow in western New York, and has taken numerous premiums; it should have been tried here. Tuesday morning I observed that a new plow had been sent in by B. M. Freeborn, fitted up with one of Wotters' patent adjusting plow-stocks. It is so arranged as to alter the pitch of the stock of the plow behind, which is a matter of very little importance to the farmer; for if the manufacturer of plows adjusts the stock or beam as well as he can when the plow is made, the farmer can give it all the variations it will require, by altering the chain, which is a much cheaper and more simple mode than by the use of the new adjusting stock.

One word on the trial with the dynamometer at Paterson, and I will close this already too lengthy communication. The trial in question I do not consider at all satisfactory, although the committee did all in their power to have it right, and the instrument appeared to be a tolerably good one. The committee were pressed upon from all sides, with 200 or 300 persons anxious to see the operation of applying a scale to test the power required to move the plow, which precluded the possibility of the committee arriving at any degree of accuracy; and the crowd treading on the ground, made it very hard, rendering it more difficult to plow, which increased the disadvantage, that each successive plow labored under in point of draught as the trial progressed. The only way to test the relative merits of the different plows in point of draught, is to put the business in the hands of a practical committee, and have no one present at the trial, except the committee and plowmen.

Mr. Meigs of the American Institute now addressed the assembly in his usual happy vein; the bands struck up a triumphant march, when all formed in and returned to the town. Here mine host of the Passaic had an ample repast spread out, and the whole company sat down to the entertainment, with appetites made keen by nine hours' fasting, and the exercise and excitement of the occasion.

At 6 o'clock we left the Paterson depot, and arrived safely in this city, highly pleased with the excursion. It was a joyous day, joyous company, and a joyous fete.

CATTLE SHOW.

This took place at the Vauxhall Gardens, entering from the Bowery, near Sixth street. It is an excellent place for a show-ground, and commodious to all. The stock was well provided for with stables, sheds, and pens; and the weather proving very fine, it went off with great spirit. There were 78 head of neat cattle entered; 9 buffaloes, caught at the foot of the Rocky Mountains; 8 horses, 1 jack, 1 jenny, and several pairs of mules; 73 sheep; 37 swine; and geese, ducks, fowls, and other kinds of poultry, *uncountable*.

CATTLE.—The number of these was not as great as we have frequently seen here, but they were of *far superior quality* to any exhibition of the American Institute which we ever witnessed. The show of Short-Horn bulls was especially good, and we doubt whether it was ever beaten at any meeting of the State Agricultural Society. It was quite gratifying to see such an improvement, and we could not but contrast the majority of the cattle present at this time, with the miserable raw-boned, ill-bred natives and mongrels, which always seemed to rise up like Pharaoh's lean kine on these occasions, to the horror and ridicule of every admirer of fine stock present. *Raw hides* and *coarse bones* seem at last to have given up the contest, in this city, to *good beef* and *tallow;* and have been taught at length to their dismay, that they can not contend with them. We have not much sympathy for them in their utter defeat—it can not be helped, and we trust it may teach their owners to adopt some means for their improvement hereafter.

Herefords, there were none present; of Devons, not a pure-bred one to our knowledge. The balance was an odd mixture, of which we thought the crosses of the old Dutch blood the best, so far as milking properties were concerned. The one entered by Alderman Peters is an excellent cow in this respect, and not a bad one in some others. Mr. Emmet's cow, Celeste, attracted much attention, as she gave upward of 30 quarts of milk of a good quality per day, then on the ground. Fat cattle, there were none present, at which we were quite surprised, as there is usually a pretty good show of these. The working oxen were few in number, but of a good quality. We particularly admired a beautiful pair of red cattle from New Haven, Connecticut. Mr. Van Winkle's brindle cattle, which won the first prize at the Plowing Match, were present, and all these yoked up, with several pairs of the buffaloes, made quite a team for display.

Horses.—Some of these were very fine, yet nothing like the number we usually have on these occasions. There was one present 40 years old. He can go 4 miles an hour comfortably. Dr. Pool's Spanish Jack was there, one of the largest in the United States, and a capital specimen of his kind. He is full 15 hands high, and has a bray and ears in proportion.

Sheep.—These were a good display, especially in the South-Down and Long-Woolled breeds. The former and their crosses are getting into great favor in this vicinity, on account of their *superior mutton* qualities. Some of the Leicesters present were unusually large. Mr. Thomas Dunn of Albany, showed one which weighed 301½ lbs. We have seen at his farm those still heavier, if we recollect right, one weighing 334 lbs.

Swine.—The grunters turned out in considerable force and variety, Berkshires, Woburns, &c. The former seemed to attract the most attention. One beautiful little white creature was present, called the Mocho breed, but in fact is a white Chinese. She was extremely fine, and as fat as a corn-fed coon; and she kept as quietly coiled down in her corner, as a young cub stowed away in a hollow log for a winter's siesta.

Poultry.—The birds were a better show than we have ever seen; and among them we noted the Chinese, Bremen, wild, and mongrel geese; Muscovy and other ducks; Dorking, Poland, Pheasant, Bucks county, Egyptian, Chinese, and other fowls. Among those entered was a hen said to lay two eggs per day, and another with four legs, which a bystander anticipated would lay *three*. Some enormous capons were shown; also a red flamingo, and a curacoa, a curious bird something like a half-grown black turkey.

After the Show was over, a considerable number of sales were made at fair prices, and more would have been effected, had it not been announced by Mr. Miller, that a sale at auction would take place the next day. With this the American Institute had nothing to do, and their officers publicly disavowed any sanction whatever of it; but as their contract for the Gardens ended on the evening of the *second* day of the Show, of course they had no control in the matter, and if parties chose to sell on the *third* day, they could not help it. Considerable dissatisfaction was expressed by those who did not wish to sell their stock at auction, and we are authorized by the officers of the Institute to say thus much to free them from any blame in the matter. We look upon the auction system of sales upon an occasion like this as *decidedly bad*, and the stock-men ought to put their faces against it. Fair sales we believe never have been made under the hammer at the show-yard, and we are free to say that they never will be; the moment animals are thus put up, gentlemen at once become shy to purchase, and will not bid with half the confidence and liberality as at private sale. It is much better for the contracting parties to meet each other face to face, and make their own bargains; and it is the intention of the Institute to engage their grounds for three days another year, so as to give those time enough, bringing stock here, to conduct their sales in a private way. In attending the different agricultural shows this season, many things have occurred to us which, if adopted, we are satisfied would be a great improvement. We shall revert to this subject hereafter.

Address of the President.—Friday the 27th, the show closed by reading the awards of the different competitors, and an address from the President of the Institute, General Tallmadge. We wish we could publish this able matter-of-fact document; but for want of space are obliged to forego doing so. It will be found, however, in our city papers. It was listened to by a very large and crowded audience of ladies and gentlemen, who expressed their approbation of the sentiments of the distinguished speaker by repeated cheers. The President represents the Institute as in a continued prosperous state, and showed conclusively the beneficial effect of its working on the Agriculture and Arts of the country, and the necessity for the sake of our independence, comfort, and happiness, of increasing and sustaining the great interests of the nation.

The officers of the American Institute have been indefatigable in their exertions throughout the Show, to make everything as agreeable and convenient to the exhibitors and spectators as possible, and they certainly deserve the thanks of the community for their untiring attention. We shall give a list of the premiums in our next. They could not be correctly prepared in time for this No., and we are anxious to have them as complete as possible when published.

THE WILD GOAT.—(Fig. 55.)

The Ibex or Wild Goat is a native of Asia, and inhabits among the rocky precipices of the highest mountains by day, and descends to the woods and valleys to feed at night. It is very timid and shy, and congregates in small flocks. The horns of the Ibex are said to be frequently three feet in length. There are two kinds of hair upon it; the outer, long and coarse; the inner, shorter and fine almost as silk. Both qualities are manufactured into different kinds of cloths. The flesh of this goat is delicate, and on this account and its shyness, it is followed by the hunters with great pertinacity. Its habits seem to be much the same of the Rocky Mountain sheep or goat of our own country. We have never heard of their being domesticated. It would be curious to trace the analogy between the Wild Goat and tame, and the causes of their different modifications of appearance, supposing them descended originally from the same stock.

ORANGE COUNTY BUTTER-MAKING.

Goshen butter, made in Orange county, this state, is celebrated the world over as being equal, if not superior, to any other produced in the United States. It undoubtedly owes its reputation in a measure to the careful manner in which it is made; the food of the cows, however, from which the milk is concocted, has something to do with it, as the pastures in the best districts of Orange county abound with sweet grass and white clover, which unquestionably are great requisites to ensure sweet butter. We took the opportunity during two recent trips to this county, to visit several of its dairies, and make ourselves as well acquainted with the process of butter-making here as our time would allow. Those the most complete which passed under our inspection, we found upon the farms of Frederick J. Betts, Esq., of Newburgh and General Wickham of Goshen. As we took full notes of the latter establishment, our description will apply more particularly to this.

The cows are regularly salted and kept in good pasture during summer; in the winter, each one by itself in a stall, with a separate door to it, in a building forming two sides of a square, round a large commodious yard. The lower story of the barn is appropriated for the stables, the upper part for hay and fodder. General Wickham has several dairy establishments; the most perfect is that within two miles of Goshen, numbering 40 cows. These are brought up to the yard night and morning, and regularly milked. The outer paling of the yard is distant only about 50 feet from the farm-house. Here, right opposite the farm-house, is placed a tunnel, into which the milk is poured as fast as a pailful is obtained from the cows. A short perpendicular tin pipe connects the tunnel with a horizontal one, which is buried two feet under the ground out of the way of the frost, and leads into the cellar of the house. When the milking operation is going on, a woman stands in the cellar with empty pans placed under the end of this horizontal tube, which, as fast as filled, she sets away upon the cellar bottom. Here the milk stands till it becomes loppered and soured, as it is said to make more butter in this state than in any other, and of a better quality. It is now poured, cream and all into the churns, which hold about one barrel each. If the weather be cool, and the milk not sufficiently warm to come readily, a can is filled with hot water, and this is placed in the milk in the churn, and stirred about till it reaches a temperature of from 55 to 60 degrees. A small water-power is now applied to the churns, the handles of which are moved up and down on the same principle as in Fig. 53, No. 8, of this periodical. Where water-power can not be had, a dog, goat, calf, or sheep is used; and the best power for an animal is Fig. 54 of the present No. Water-power, however, is to be preferred, as it is the most steady, and according to the good housewife's notion, who certainly ought to be authority on these subjects, it produces the best butter. When the butter has come, the power is stopped, and a pump is rigged into the churn; the handle of this instrument is then attached to the power, and the butter-milk pumped up into a reservoir just outside of the cellar, standing on a level with the ground. From this the butter-milk is conducted by means of a tin pipe about 100 feet to another reservoir close by the piggery, from which the milk is dipped out in buckets, and fed to the pigs; so that everything almost, moves of its own accord or by water, from the moment the milk is drawn from the cows in the yard, till it is churned into butter, and the butter-milk is concocting itself into pork from the pigs' stomach. The whole expense of laying down these tin tubes is but trifling. The expense of building a water-wheel, and bringing the water to it is greater or less according to one's position; but when a dairy of 40 cows is kept, it is well worthy of being adopted if not too costly.

After churning, the butter is thoroughly washed off with cold water; if this be not done, it is difficult to get the butter-milk clean out of it. As soon as cool and solid, the butter is taken on to a marble or smooth stone table, properly salted with clean, fine salt, and worked over thoroughly with a wooden ladle or spatula. The hand is never allowed to touch the butter, as it is warm, and softens it. After being thoroughly worked, half, or full firkins, made of white oak staves, (the latter holding about 85 pounds, and the former 40 pounds,) are used for packing it. Previous to packing, the firkin is well washed inside with cold water, and then rubbed all around with salt; the butter does not then adhere to the sides of the keg, but comes off clean when wanted to be taken out for table use. It is put down in layers as churned of three or four inches deep. When the firkin is full, a linen cloth is placed over the top of the butter, on this about half an inch of salt, to which a little water is added so as to form a brine. The firkin is now headed up and sent to market. Mr. Betts thinks if the butter be destined for shipping, stone jars with covers would be preferable to firkins for packing, and his opinion coincides with our own.

In butter-making, a good cellar is a very important consideration; indeed, without one, it is almost impossible to produce good butter. The cellar should be about 7 feet deep; 18 inches of which should be above the level of the ground, for the purpose of having windows in it for ventilation. These should be open at all times, and instead of glass be made of fine wire-gauze, stretched across the apertures. This prevents the entrance of the smallest fly or gnat, and yet is no hindrance to the air. The walls ought to be of stone, and pointed; the bottom of stone slabs or cobble stone, thickly plastered with water cement. Made in this manner, neither rat, nor mouse, nor any other vermin can find entrance; and the butter, and cream, and milk, are perfectly protected.

General Wickham's farm-house is one of the nicest cottages we have lately viewed; with a pretty yard in front, studded with flowers, and embosomed in shrubbery. The piggery, barns, stables, and yards, are also very complete; and they all stand close by a wild little stream that runs babbling on in its clear full course over a pebbly bottom to the noble Wallkill. Altogether it is one of the prettiest models of a dairy establishment we have ever seen, and a young friend of ours, who accompanied us to inspect it, quite forgot his own handsome cottage and fine farm, in admiration of that of General Wickham's.

In a future No., we shall take up the milk dairies of Orange county, and give a description of the method of preparing and sending it to this city for sale. We shall also have many particulars to relate hereafter of farms which we visited there, course of cropping, stock, and other matters.

This county is unsurpassed in some respects, and in consequence of its contiguity to a city market, its course of agriculture varies considerably from those portions of the state more remote.

BREEDERS' CONVENTION.

About forty gentlemen met on Tuesday evening, at 7 o'clock, October 17th, at the Repository of the American Institute, agreeably to the circular of the Committee of the New York State Agricultural Society, of June last, to form a convention of breeders, to take into consideration the establishment of some fixed scale of points, which shall form the criteria of the best animals of the different breeds of domestic cattle.

The convention was organized by appointing Mr. Bement of Albany, chairman.

A motion was then offered and adopted, that the chairman nominate a committee of three, to select officers for the convention. The following gentlemen were appointed for this purpose:—Messrs. Prentice, of Albany, Watson, of Connecticut, and Randall, of Massachusetts, who reported—Dr. John A. Pool, of New Jersey, President, Jacob C. Parsons, of New York, Secretary. The above nominations were confirmed by the convention.

The convention being called to order by the president, the secretary was desired to read the Circular setting forth the object of the convention. Mr. Prentice of Albany then offered a few remarks, stating the importance of a knowledge of the distinguishing points of excellence of the different breeds of cattle. He was followed by Mr. Watson of Connecticut, on the same subject, advocating the great superiority of the Short-Horn breed. He finished by reading a paper detailing the points necessary to constitute a superior animal. Mr. Allen of New York, then rose and spoke in general of the points necessary to constitute good animals of all kinds, and named these to be, 1st, a deep wide brisket; 2d, a general fineness of bone, hair, skin, and small offal; 3d, good handling. He then mentioned several minor qualities, which he also considered essential. In size he thought animals should differ in different sections of the country, according to the quantity of food to be furnished in the pastures, &c., and that the points constituting a good feeding animal, were essentially the same the world over; he did not care whether it was a horse, ox, sheep, pig, bird, or fish. Mr. Bement of Albany next followed, reading a paper containing his views on the subject in question, and pointing out emphatically the necessity of a standard in a detailed scale of points, in order to judge understandingly of the merits of cattle.

A resolution was now offered and adopted, that committees be appointed to report scales of points, which should constitute good animals of the various breeds. Messrs. Prentice, Bement, and Allen, were appointed the committee on Durhams; Messrs. Corning, Sotham, and Pumpelly, on Herefords; Messrs. Allen and Colt, on Devons; Messrs. Randall and Watson, on Ayrshires; and Messrs. Jacques, Field, and Starr, on native cattle. The above committees were directed to report at the next meeting of the convention, which was adjourned to be held at the same place, at 7½ o'clock on Wednesday evening.

Wednesday, October 18th.—The convention being called to order by the president, the Reports of the several committees were decided to be submitted. That on Devons was first called for; but the committee declared themselves unprepared to report. Mr. Pumpelly then presented a report on behalf of the committee on Herefords, which was read, accepted, and reported to be placed on file. Mr. Randall now offered the report of the committee on Ayrshires, which was read, accepted, and ordered to be filed. Mr. Bement, on behalf of the committee on Short-Horns read the following report:—

After mature reflection and consultation, your committee do not feel prepared to make a report upon the scale of points which shall be considered as constituting a perfect animal; they therefore propose, that the subject be adjourned for consideration till the next fall meeting of the N. Y. State Agricultural Society, or of the American Institute. In coming to this conclusion, the committee hope that it will be no bar to any gentleman expressing his opinions on the subject in question at the present meeting, trusting thereby that a foundation may be laid for an *enlightened* discussion and decision next year.

C. N. Bement,
E. P. Prentice, } *Committee.*
A. B. Allen,

The above communication was received and ordered to be filed. The committee on native cattle made no report. Mr. Sharwood of England then rose, and offered a few remarks on the necessity of adopting a scale of points for animals. Considerable informal conversation now took place, when the convention adjourned to meet at the same time with the New York State Agricultural Society, on the 3d Wednesday of January next.

We look upon the establishment of a scale of points, which shall be considered as constituting the criteria of the best breeds of domestic animals, as a very important one; and we hope that it will be *well considered*, and that nothing *crude* may be put forth as a guide to the public in these matters. Such a report ought to be accompanied with casts of the animals as a whole, and then in separate parts, both inside and out, to elucidate the subject in full, with all the different points numbered and explained. If we do anything *less* than this, we shall only be repeating what is already as well said in British periodicals as can be. For our own part, as the attention of British breeders is now particularly called to this subject, we would prefer first seeing a report from them. They have more knowledge and experience than we, and more time and wealth to bestow upon it; and after seeing what is done in Great Britain, we shall be prepared to act more understandingly in our own country. We do not say that their criteria should be ours entirely; our climate and wants demand something varying, perhaps, from any part of Europe; and when we have seen what the science of Great Britain decides as constituting perfection, then we can adopt it with such modifications as shall be considered necessary for the different sections of America.

NEW YORK FARMERS' CLUB.

The regular monthly meeting of this Club took place at the Pacific Hotel, on Tuesday, the 26th of September, General Johnson in the chair. Several of the members being absent, attending agricultural shows in the country, there was not so full an assemblage as usual. A desultory conversation ensued, and some specimens of fruits and grain of different kinds were shown. Dr. Field then read a paper on the beneficial effects of muck, as applied to Indian corn and other products the present season, on his farm in Dutchess county. We hope to be favored with this paper for our columns hereafter. Other communications were read on various subjects by Messrs. Dey, Meigs, and Wakeman. Those of the last-named gentleman we subjoin, and Mr. Meigs' account of Mr. Maxwell's farm shall appear in our next.

EGYPTIAN CORN.—T. B. Wakeman, presented a stalk of the Egyptian corn, bearing the ripe grain. It was deposited by Mr. James de Peyster, Long Island, with the American Institute. Mr. De Peyster has cultivated this kind of corn for several years; first, in Columbia county, since, on Long Island. He thinks it should be treated as Indian corn, except planted in drills close together. Less attention is required than with Indian corn. It is not as much affected by frosts. His crop has never failed, but the heads he thinks have grown larger. His practice has been to apply a little ashes in raising it. He thinks on good ground one hundred bushels may be raised on an acre. Fowls are remarkably fond of it. He has made it into cakes, which were excellent. The stalks from Mr. De Peyster bear a plumper and larger grain, than any which have been shown at the Institute. It has been suggested that on experiment, it has been found, when cut for the purpose of feed for cattle, that it grows up again more rapidly than Indian corn, and appears to be less injured by being treated in this way. It was permitted to grow about two feet high before cutting. Mr. De Peyster has never made trial of it for feed, when cut green in this way. It is recommended that some one make the experiment by sowing it broad-cast, as is the practice with Indian corn, and learn the results.

Its hardy character in resisting frosts, and its abundant yield, added to its ready growth after being cut for fodder, as a substitute for grass, are considerations that recommend it to be effectually tried by our farmers.

SOUTH AMERICAN POTATO.—The gentlemen of the club will remember, that about the middle of June last, a vegetable was shown here resembling a potato, said to have grown on a vine—one of five received by General Tallmadge from South Carolina. The original seed was obtained from South America, where it is said this vegetable is used for food. One of these potatoes, so called, was given to the gardener of P. S. Van Rensselaer, Esq., who planted it the 20th of June. On the 16th of September I was at Mr. Van Rensselaer's place, in Dutchess county, and examined it. It was growing, to all appearances, vigorously, and had attained about 15 feet height, and had been turned down, by Mr. Van Rensselaer's direction, to enable the gardener to remove it into his green-house, in case it did not come to maturity before frost; and for that purpose it had been planted in a moveable base. The full length of the growth was at that time, 16th September, 18 feet, having grown about 3 feet after it was turned down.

This potato resembles the Lima bean—heart-shaped leaf, joints about one foot apart, and a sprout from each joint. Small nodes had formed on the joints, indicating the commencement of the formation of fruit, and a few small blossoms were discoverable at the top.

The other four potatoes were distributed to Messrs. Lenox & Sheafe, of Dutchess county, Mr. Brill, Jersey city, and Samuel Stevens, Esq., of Astoria, Long Island. It is hoped we shall have full reports from each of these gentlemen at a future meeting of the club.

On account of the Show of the American Institute the past month, the Club has had no meeting, save a festive one for a dinner the 25th October. Other engagements prevented our being present on the occasion. We understand, however, that it was quite an intellectual feast, with the usual accompaniments of toasts and speeches. The regular meeting for the discussion of agricultural subjects will be resumed the present month.

ERIE COUNTY AGRICULTURAL SHOW.

THE Third Annual Show of the Erie County Agricultural Society, was held in the city of Buffalo on Tuesday and Wednesday the 10th and 11th October, and we are indebted to the Commercial Advertiser for a full report of the doings thereof.

The weather was unpropitious, yet we see that the entries of articles were far more numerous, and the amount of money received from the farmers for membership much greater, than at any previous Show of the Society—this is gratifying. We have given such long lists of premiums of the State Agricultural Society, and the county societies are so numerous, that it must not be expected of us to copy them hereafter. We shall be obliged to confine ourselves merely to a report of new and interesting facts, and such extracts from addresses as strike us as best calculated to advance the general cause of agriculture. Dr. Lee's address was of a high order. We subjoin an extract, showing the great value of charcoal as a manure, and the facility of augmenting the crop of wheat to an average of 50 bushels per acre, under an improved system of cultivation.

I have stated to you that most plants require, in addition to water and carbon, a portion of nitrogen. This also comes from a gaseous substance in the atmosphere. Although nitrogen forms the largest element in the air, (79 per cent.,) yet it has been pretty well settled that plants do not obtain their nitrogen by decomposing common air, but derive it from ammonia, which is furnished to the atmosphere in great abundance by a world of decomposing vegetables, and animals. It is the ammonia that escapes from putrefying substances that causes their offensive smell. Now, again, comes up the practical question: How are we to collect this highly volatile gas, and transform it at the cheapest rate, into wheat, beans, cheese, and wool, of which it is an important element? Rain water has a strong affinity for ammonia—which is a compound of 14 parts of nitrogen and 3 of hydrogen. Water at 50° will absorb 650 times its bulk of this vegetable food. Every rain, then, brings considerable quantities of it to the ground. It is the ammonia in rain water that imparts to it its peculiar softness in washing the hands or clothes. It is the ammonia in snow that makes it valuable as a manure; and it is the ammonia in rain water that causes it to putrefy in some degree, like an animal substance, when water is permitted to stand in warm weather in a close vessel above ground. The first fall of rain after a long drought is much the richest in this gas. Being extremely volatile, it escapes into the air again after a warm shower much quicker than water evaporates. What then will aid the cultivator of plants, and seize this volatile ammonia, as lime does carbonic acid, and hold it permanently about their roots, in such a shape that it will feed them all they need, and no more? For an excess of this stimulating alkali, like an excess of salt in our food, will destroy life instead of supporting it.

Common charcoal is the cheapest, and therefore the best material to apply to cultivated fields for this purpose. It will absorb 90 times its bulk of ammonia, and will give it out slowly to the vital attraction of the roots of plants. Most of you know that charcoal will correct the taint in meat—will purify rain water in a suitable cistern, so as to render it the purest water for culinary purposes. Such charcoal should be often renewed in filtering cisterns, and when saturated with ammonia, is an extremely valuable manure. The liberal application of this well-known substance to the wheat fields in France, has mainly, in connexion with the use of lime, added within the last ten years 100,000,000 bushels to the annual crop of wheat grown in that kingdom. The charcoal should be sown in May, at the rate of 75 bushels per acre, well pulverized. This subject is one of vast practical importance. By studying the science of agriculture, you may grow fifty bushels of good wheat on any acre of your land, I have good reason to believe, every year, bating of course extreme casualities.

You all know that a single kernel of wheat, will, sometimes, when its fecundity is highly stimulated, send up 20 stalks, and that each stalk will bear a head containing 100 kernels. Here is a yield of 2,000 fold. Nature then has rendered it practicable to harvest 2,000 bushels of good wheat from one bushel of seed. The most skeptical among you will not deny that 2,000 kernels have been produced from one kernel, and that the same natural causes that produce such a result in one instance, will ever operate, at all times, under like circumstances, in the same manner. Hence, it is but reasonable to say, that nature is quite as willing to produce 50 bushels of good wheat on an acre of ground every year, mark me, *if her laws be obeyed*, as she is to grow fifty bushels of weeds every year on the same ground.

THE PEACH-TREE WORM.—This worm can be destroyed by growing the tanzy, wormwood, or any bitter plant or shrub, around the peach-tree. A dozen sprouts or so are quite sufficient for protection, and it is best to set them out in the spring of the year. Saltpetre mixed with salt at the rate of two ounces of the former to one pound of the latter, and spread around the trunk of the tree, will destroy the worm, and prevent the yellows. Verdigris mixed with oil and poured into the holes and then plugged, we have seen also recommended. This is said to be certain death to the worm, without danger of injuring the trees. Notwithstanding this assertion, we should be very careful in the use of verdigris.

INACCURACIES.—We are glad to see that our Barclay street neighbor, the Spirit of the Times, has taken up this subject. In its columns of the 28th October, after expunging the terms "Old Sir Archey, Old Eclipse," and "sired by," it says: Many write "foalded" for *foaled*, "tract" for *track*, (*course* is a still better term than *track*,) "sorrel" for *chesnut*, "full brother or sister" for *own* brother or sister, "blooded" stock, for *blood* stock, "put to" for *bred to*, "raised," when applied to horses, for *bred* or *reared*. We hope the Spirit will continue its "greetings" in all these matters, for no one is more *au fait* or more capable.

Berkshire Swine.—*Errata.*—On page 201 of this paper, the first premium on sows was erroneously given to L. F. Allen, instead of R. L. Allen, of Buffalo. We are not to blame for this error, as it was copied from the Rochester Democrat, containing the only report of premiums in our possession at the time we went to press. The New Genesee Farmer has the same error, which it should correct. We put the matter right in No. 8, page 233 of the Agriculturist. The boar belonging to Mr. Hills, which took the first premium, was a Berkshire, and in fact no other breed had any chance with them. In conclusion we would say, that R. L. Allen has a very superior lot of Berkshire breeders on his farm, imported for him, by us, directly from England, and he will supply choice pigs of this fine stock at fair prices.

Devon Cattle.—*Errata.*—In Mr. R. L. Allen's report for this paper, of the late N. Y. S. Ag. Soc. Show at Rochester, page 199, the word "Devon" was erroneously printed "Down." The Devons exhibited on that day were a very choice lot from recent importations, and principally owned by Messrs. E. P. Beck, of Sheldon, and L. F. Allen, of Black Rock. They are of large size for Devons, fine in their points, and possess deep-milking qualities, and would have taken a good share of premiums, had they not very improperly been classed with Short-Horns, instead of being permitted to stand as a class of their own breed. As it was, Mr. Beck took two premiums, and Mr. Allen one, against the Durhams, in classes II., III., & IV. of bulls. We hope that Durhams, Herefords, and Devons, may be classed by themselves another year; and that animals of any breed, pure or mixed, may also be classed by themselves; for it is not fair to pit animals against each other, so totally distinct in appearance.

List of Premiums and Reports of the N. Y. S. Ag. Society.—We trust that our readers will not think these too long. They are now finished for this year. The reports of the committees are valuable, and we are sure that they will be read with interest. That on Plows, page 282 of this No., is admirable—the very best within our recollection; and for one, we feel under obligations to the committee for giving the society so thoroughly practical a document. It ought to be widely copied. Mr. Cornell, page 259 of this No., has also furnished an excellent paper on plows. Our southern correspondents will find many of their former questions to us answered in these reports.

Fair, Show.—It is improper to use the word Fair in the sense that we do, as applied to the Shows of Agricultural Societies. We were several times corrected for using this word improperly in England. "Fair," said a gentleman to us one day, somewhat contemptuously; "this, sir, is a Show." We are determined to abandon the use of the word in this periodical hereafter, as it is now generally applied in the United States. A Fair, is an assemblage or meeting of *buyers and sellers* of stock, or articles of any kind, simply. A Show is an assemblage for the *exhibition* of animals, &c., similar to that of the American Institute in this city, the State Agricultural and County Societies, &c. We respectfully ask our brethren of the press to join us in endeavoring to get these words used properly hereafter. We hope, also, that they will join us in the corrections which we suggested in our September No., page 171, second column.

Cultivation of Wheat in Kentucky.—The Dollar Farmer says that Mr. Wm. C. Williams, near Louisville, has succeeded in obtaining 600 bushels of good wheat from 20 acres of land. *Early* sowing was one of the chief causes of this great crop. He plowed up a rich clover ley, 8 to 10 inches deep, harrowed and rolled well, and laid off into beds 9 feet wide, with deep water-furrows. He soaked his seed in brine, and then rolled it in lime, and used 3 bushels to the acre. We beg reference to our own observations on early-sown wheat, page 129 of the current volume. We do not think September too early for Kentucky.

Agricultural Shows.—A notice of the one we attended at Hartford, Connecticut, and Orange county, this state, as well as some others, will appear in our next.

The coming Winter.—If signs prove true, the coming winter will not be near as cold as the last was, especially at the north. The deep and frequent snows in the latitude of 42° and above, the past month, certainly does not augur very favorably for a mild winter; but we take the summer, rather than the fall weather for our guide; and it is our intention, the ensuing season, to see whether it corresponds with our previous observations, which would make it neither a very cold nor a very mild one.

Wool-Growing.—We are glad to see the Prairie Farmer take up the subject of growing wool at the west with such spirit. There is a raciness in its arguments which is quite refreshing. For example: it says that sheep obstinately persist, like the Irishman's pig, to live on the Prairies through the winter, and won't die off to suit the prognostications of those who think this part of the country unfit to grow wool in. How unaccommodating!

The Herd-Book.—Volume IV. of Coate's Herd-Book has just been received from England. It is devoted entirely to Bulls. Volume V. will soon follow with Cows. It is handsomely got up, the portraits of the animals more natural, and in better style than in the preceding volumes. It contains upward of 400 pages.

Extra Numbers.—We shall issue a number of our paper on the 15th and 1st of each month hereafter, till Volume II. is completed, which will be on the 15th of December next. We trust that our friends will bear this in mind, and favor us with an extra quantity of communications. Volume III. will promptly commence on the 1st of January, 1844.

ORIGINAL CORRESPONDENCE.

Translated for the Gardeners' Chronicle, from the German of Dr. Hugo Mohl.

REVIEW OF LEIBIG'S VEGETABLE PHYSIOLOGY.

(Continued from Page 250.)

Another important point, says Professor Mohl, (p. 37,) which Leibig's theory does not explain, is, that the saline bases absorbed by plants are not only absorbed in the shape of carbonates, (which are easily decomposed by the mere vegetable acids,) but often also in the shape of phosphates, sulphates, &c. According to all experience, these salts are not less essential to vegetation than those bases combined with organic acids. Silica, also, is an ingredient equally essential to the growth of most, if not all plants. Which part these substances take in the vital process, is (says Mohl) almost unknown, unless, indeed, we may presume that the sulphates yield plants the sulphur required for some of their organs. Of the phosphates we know still less; we are ignorant why they chiefly occur in young plants, and in their seed; and we are perfectly ignorant of the quantity required for vegetable growth—for analysis shows that the amount of phosphates varies considerably even in the same organ in plants grown on different soils, as is best seen in the different sorts of grain.

In that chapter which is devoted to the Culture of Plants, Professor Leibig puts forth a regular theory of vegetable nutrition—as far, namely, (observes Dr. Mohl,) as Leibig's unconnected way of writing admits of any systematic arrangement. He again starts from the assumption, that humus can not be absorbed and used as food by plants; for two reasons—one chemical, and the other physiological. He, in the first instance, denies that the humus of vegetable mould possesses the properties ascribed to it by chemists, it being absolutely insoluble in water, and not combining with earth into soluble salts. The latter, he says, may be seen in calcareous caves, whose stalactites, instead of consisting of humate of lime, do not contain a trace of vegetable matter. Dr. Mohl says that he does not intend to settle these opinions, for he has no doubt that chemists will take them up in due time. He merely throws out the following remarks: "It can not be positively asserted that the humates contained in vegetable mould are insoluble in water, because water will dissolve out of the soil a certain amount of an organic, brownish substance—an experiment which can be made with any garden soil; still coal of humus seems to possess the property of subtracting these substances from a solution passing or filtering through soil, otherwise (as Leibig has stated) all our springs would contain brown water. It appears, moreover, that besides coal of humus, the inorganic substances of the soil themselves possess (although in a lesser degree) the property of withdrawing from water the substances dissolved in it—a circumstance to which the greater purity of springs coming from a great depth may be ascribed. Still this withdrawal of organic substances is obviously only a partial one, for our spring-water is never free from organic substances—a fact borne out by analysis, as well as by the putrescence to which spring-water is subject. This perfectly agrees with the new experiments of Saussure, who found in all waters an azotised substance soluble in water." All these facts, therefore, give quite another result from that which Leibig has arrived at, viz., that the water which filters through vegetable mould will always supply plants with some portion of organic matter. How far this substance influences the nutritive process of plants, was the proper question for Leibig to examine, but which he has neglected to enter into. Saussure has, however, made some experiments on the absorption of humate of potash, and the extract of vegetable mould by the roots of plants (Bibl. Univ., vol. xxxvi., p. 340.) Although these experiments do not strictly prove that this *is* really the case, under all circumstances; still they go so far as to prove that it will be the case as long as the roots are healthy, and do not, by their putrescence, yield humous substances to the water. Leibig, in a subsequent refutation of these experiments, ascribes their telling against him to an error of calculation! In another part of this chapter (p. 109) Leibig says that humus, if not properly exposed to the influence of atmospheric air, will form with water a solution of a brown color; but that no plants can grow in such soil, for the humus will consume all the oxygen contained in the air. It is (says Dr. Mohl) quite inconceivable how a man can write such things, when the inspection of any peat moss will show the fallacy of such assertions.

The second argument which Leibig brings forth to support his favorite assertion of plants not feeding on humus, is based on physiological grounds. He first announces as a general principle, that, under the appellation of food, such substances only can be included, as being derived from external sources, can maintain all the vital functions, and which the organs of a plant can use for the formation of the substances peculiar to them. This ambiguous definition includes (says Dr. Mohl) some anomalies, and does not apply to several reputed kinds of food. Starch, for instance, is certainly one of the substances on which man feeds; yet he could not live on it alone. In farther explanation of his views, Leibig adduces the example of a grain of wheat, which contains the necessary ingredients of the germ, and the first fibres of roots; and he adds that we have to suppose that these ingredients are mixed just in the proportion that is required for the development of those organs. If one of the ingredients, say starch or gluten, were superabundant, they would not serve either for the formation of leaves or otherwise. Carbon, also, as well as ammonia and water, are always combined in plants with an azotised matter; and it is for this reason that substances, containing no nitrogen, like gum, sugar, &c., and consequently no humic acid, (which stands next to them in a chemical point of view,) are not used as food by plants, but would rather impede the vital process, and kill the plant. (p. 116.) In analysing this string of assertions, Dr. Mohl observes, in the first instance, that the absorption of azotised compounds as food by plants is a fact doubted by no one; but he doubts whether the quantitative proportion between the absorption and digestion of azotised and unazotised substances, assumed by Leibig, be based on fact. Leibig says that this proportion must exist in the grains of wheat. But Hermstadt's fine experiments on the different sorts of grain show quite the contrary; for one sort of wheat contains 41 per cent. of starch to 34 per cent. of gluten, while another sort shews a proportion of 65 to 9. But this varying proportion of azotised and unazotised substances also occurs in the organs of vegetation themselves, as may be seen in the roots of beet cultivated on a soil rich in vegetable mould, or in one manured with animal matter. Chemistry, therefore, does not support Leibig's assertions. Indeed, he himself, in some degree, contradicts his own statements, when he says (p. 119) that if plants obtain a greater proportion of carbon than of nitrogen, then the carbon will not be used for forming gluten, or albumen, or wood, nor for any constituent part of an organ, but will be secreted in the form of sugar, starch, oil, wax, resin, mannite, gum, &c.

The assumption (continues Dr. Mohl) that the organs of plants consist of gluten, albumen, and wood, and that other constituents, like sugar, starch, &c., are mere secretions, is decidedly wrong in an anatomical point of view, for the solid substance of all organs consists of woody fibre alone, and all the other ingredients are merely preserved in the cellular substance, &c. The same objection may be raised against the opinion, that starch, gum, &c., preserved in the cells, are mere excrements, and not constituent parts of the organ. On the other hand, Dr. Mohl considers Leibig's opinion, that a greater amount of nitrogen is required for forming woody fibre, than sugar, gum, starch, &c., as perfectly true. This is corroborated by the experiments of Payen, who found in all young organs, while in a state of vigorous development, an abundance of nitrogenous juices, which leads to the conclusion that nitrogenous substances are essential to the development of new elementary organs, a position fully borne out by recent microscopical experiments on the formation of the cellular tissue in plants. If this is the case, we may also assume that the formation of substances nearly related to woody fibre, such as sugar, gum, and starch, requires also a certain amount of nitrogen; and that a less amount, although it may suffice for the abundant formation of those substances, will only produce a small amount of woody fibre, is an opinion adopted by Leibig. It may be also assumed, that if such an amount of nitrogen as is sufficient for the formation of a moderate quantity of woody fibre, is to be divided between the formation of gum and other similar substances, (composed of carbonic acid and water,) and that of woody fibre—the same amount of nitrogen might suffice for the formation of a greater amount of woody fibre, and therefore, for the more vigorous growth of the plant; in those cases where the plant has already absorbed part of its food in the form of substances, which (being composed of carbonic acid and water) have also attained the first degree of vegetable assimilation.

Leibig believes, that, in this case, the function of the leaves will be impaired. This, however, it is impossible to decide, "as we have not even an idea of the variations which the assimilative process may undergo, according to the difference of the substances on which plants feed. It is also, in most cases, less essential to know whether plants absorb only organic substances and water, than whether it is necessarily in conjunction with inorganic matter, that such absorption takes place; in which case, the digestion (Verarbeitung) of inorganic substances would not be suspended; but, in conjunction with this assimilative process, another and different one would make its appearance." To decide on the existence of these processes, it would be necessary to know the metamorphosis which food undergoes in plants. But this is not the case, as we neither are aware of the manner in which gum or sugar are formed, nor of the further changes of these substances into woody fibre. Chemistry, it is true, can change wood and starch into sugar, but only by the application of strong chemical agencies, which we know are not made use of by plants. To imitate the real process is beyond the reach of chemistry; still, it is to this very process that plants owe their growth. Under such circumstances, all that we can do is to make plants absorb organic substances, and to observe the phenomena which their growth exhibits subsequently. It has been shown already that certain plants live only when they absorb organic substances; our cultivated plants prove the same thing, as well as the detailed experiments of Davy and Saussure, which have not been hitherto disproved. The theory of Leibig, therefore, is untenable, and is equally unsupported by experiment, or by exact reasoning on the nutritive processes of plants.

Leibig has himself felt that arguments founded on fact are required for the support of his theory, and he has pitched upon Mount Vesuvius to supply it. He dwells, therefore, (page 131) on the luxuriant crops in the environs of this mountain, in a "soil, which, according to its origin, does not contain the least trace of organic matter, and still is considered as the very type of fertility." We possess, however, no chemical analysis of this soil, derived as it is from volcanic cinders, neither does Leibig say anything on the subject, but merely appeals to its general volcanic origin. But it would be a surprising thing (says Dr. Mohl,) if a soil, on which, for many centuries past, most extensive farming operations (Dreischwirthschaft?) have been carried on, should be destitute of humus. This could be only the case, if, after every few years, it was again covered so deeply with the ashes of constantly new eruptions, that the ancient soil and all its organic matter should be placed beyond the reach of new crops. This, however, we know is not the case, and even such eruptions as do take place at intervals could not effect this. The heaviest fall of ashes (since the destruction of Pompeii) was that of 1822, which amounted on the slope of the mountain to 3 inches, and in the plain from 15 to 18 inches; but this was (according to Humboldt) the treble of any previous fall of ashes. We know, moreover, that even the slightest fall of volcanic cinders kills vegetation over an extensive area, so much so that one crop among eight near Mount Vesuvius is always lost through such calamities. It is, therefore, these very falls of ashes which cause the formation of a vegetable stratum on a large scale, and such must contain humus. This corresponds entirely with what Mr. Lyell states, ("Princ. of Geol." ii., 148,) that he found near Pompeii under the volcanic cinders of 1822, a layer of vegetable mould of the thickness of three feet.

(To be Continued.)

Mr. Schenck has given us below an account of the most extraordinary butter cow we ever heard of. Yet, notwithstanding this, our readers may rely upon it as being strictly correct. To those who do not know Mr. Schenck, we can only say, that he is one of the most reputable citizens of New York, and not at all likely to deceive either himself or others. We merely make these remarks to silence all cavil. The cow in question is polled, having no horns, and is evidently a three fourths bred Durham. In form, color, and several other characteristics, she exactly resembles animals which we have seen in England, bred from red Galloways by Durham bulls. She is above the ordinary size; with a good spread of hip; a long head; low, deep brisket; handles well; and shows the largest milk veins which we ever saw. Her color is red and white. She was very low in flesh when we looked at her in October, and so lame as to walk with difficulty. We much regret that she could not have been bred to a bull of deep milking family, her stock, then, would have been invaluable.

For the American Agriculturist.

EXTRAORDINARY BUTTER COW.

Matteawan, Dutchess Co., October 6th, 1843.

The cow Emma was nine years old last spring. I got her when a calf from Mrs. Thomas Storm at Kipp's bay. She was from a cow that she had called the cream breed. This is all the pedigree that I can give.

I never till the summer of 1842 kept her milk separate from three other cows which I have, and then, for experiment, I tried it only one week. She then gave 18 quarts per day, and her milk made 15 lbs. of butter. During this time she was kept on grass only. The past summer she received an injury in her spine, and in consequence of this had barely the power to get up, and hardly lived through calving.

On the 21st May I commenced keeping an account of her milk, and the butter it made. She at no time exceeded 16 quarts per day, and on the 10th June, being 21 days, she had made 65½ lbs. of butter of the best quality. This was so incredible, that I could scarcely believe my own senses, although I weighed the butter at every churning myself. I thought I would try again for a day or two. I kept one day's milk by itself, 15½ quarts on the 15th June, and churned it. All the milk was churned, as it appeared to be unnecessary to cream it. I had 3 lbs. 8 oz. of butter ready for the table. The next day it was also tried, and it produced 3 lbs. 4 oz. The first day above, the milk was put in two pans—the other day, only in one pan, which may have made the difference of the quarter of a pound.

In September she only gave 11 to 12 quarts per day, and made 10 lbs. of butter a week—further, I have not tried her milk. She was so lame during this time, as scarcely to be able to move. She was kept on good pasture, and besides this, I fed her night and morning with a bushel of cut hay and 8 quarts of shorts, which is still her regular feed.

Peter H. Schenck.

For the American Agriculturist.

INDICATIONS OF WEATHER.

Buffalo, October 16th, 1843.

"Dost thou know the balancings of the clouds? Out of the south cometh the whirlwind: fair weather and cold, out of the north."—*Job.* "When it is evening, ye say, it will be fair weather, for the sky is red; and in the morning, it will be foul weather to-day; for the sky is red and lowering."—*Matt.* "When ye see a cloud rise out of the west, straightway ye say, there cometh a shower; and so it is. And when ye see the south wind blow, ye say, there will be heat; and it cometh to pass."—*Luke.*

We have high authority for predicting the weather from the appearance of the sky, and it is certain that this has been a leading fancy in all ages and climes. Indeed, so important is a foreknowledge of the approaching weather, especially to the husbandman, that he may well stand excused for paying a very close attention to its indications. These are afforded not only from the appearance of the sky, and the wind, but also by the habits of the larger animals, birds, fish, reptiles, and insects; and how often by the feelings of the human system, as the shooting from a corn, a chronic wound, or rheumatic pains, when an east wind sighs through the trees; and how elastic and bounding do the spirits rise when a fresh northwester comes booming along from the arctic?

The moon, too, has a full share of influence assigned her in changing the face of the sky, and varying the range of the thermometer. It has been estimated that at new moon, when she exerts her influence on the earth in conjunction with the sun, the chances of a change in the weather are as 7 to 1; when in her first quarter, 90° distant from the sun, and when full and in opposition to the sun, the chances of change are as 5 to 2; and when in her third quarter, as 5 to 4. In perigee, when nearest the earth, the chances are 7 to 1; and in apogee, or at the greatest distance, as 4 to 1. That the moon should have some influence in producing changes in our atmosphere, is very probable. It is certain she causes the tides by her attraction; and it is equally certain, that she produces tides in the atmosphere, which must have some effect on the weather. But what that effect is precisely, who can tell? Where is the manual that points out her influence with any certainty? and of the thousand and one moon-struck philosophers, who are constantly gazing on her placid face, which one of them all, has reduced his observations to certainty or method? We may safely let the moon attend to her own affairs, while we look for some more certain harbingers of change. These signs are in everybody's mouth, though a majority of them are fallacious. We have room only to notice some of the most prominent and best authenticated.

It may be stated as a philosophic fact, that any general change from extreme heat to cold, unless caused by a strong north wind, produces rain. This result is based on the soundest principles of science. For the warm air takes up a large amount of water in the shape of aerial vapor, and this quantity, when the heat is at 100° Fahr., nearly equals 1-20 the weight of the atmosphere. When the temperature falls to 50°, the air can hold but 1-75, so that nearly 3-4 of all the aqueous vapor before suspended must fall to the earth. This effect is briefly and unexpectedly foretold in the sublimely beautiful bursting of the thunder-cloud, as it rolls rapidly over our heads on a sultry summer's day. Electricity is the disturbing cause here, which by suddenly lowering the high temperature of the air, compels it to let go of large portions of water it had abstracted from the surface below, which now comes pelting down, like molten bullets from the sky. In general an east wind will bring a storm, and especially one from the southeast and south. This is rendered more probable when the wind increases considerably, by this means condensing the atmosphere, and compelling it to part with a portion of its vapor. Variable winds produce rain; it also follows a hoar frost. A rainbow in the morning foretells rain in the course of the day; so too, does distant thunder heard at that time. When a storm clears off in the night, rain may soon be expected. There are many appearances of the winds and clouds, which to eagle-eyed observers, as mariners, fishermen, and shepherds, whose situations compel them to a close observance of nature, for their own protection, are so plain that they can hardly be mistaken; but these are in most cases local, and so dependant on seasons and other circumstances, as hardly to justify recording.

In general, when animals are careful in providing themselves with good shelter and warm nests, a storm may be expected; and when they are seen indifferent to their protection, fine weather may be anticipated. Sheep, gambolling in their pasture, foretell a change; and when they lie out openly on some exposed knoll, fair weather may be confidently predicted. In wild animals, these indications are much more distinct and unerring, as they are habituated to rely on their instincts, while the artificial, domesticated brute has been taught to depend almost solely on the reason of his master. Yet the hog, one of the most constant and ancient pets of man, is seen to go round, uneasy, and careful in gathering up whatever straw and waste grass and weeds he can find, and bestowing them in some safe place for a bed during the coming storm.

Birds, too, are remarkable indicators of approaching weather. How they scud to their sylvan retreats when the tempest approaches, and how hushed are their warbling notes, as if afraid to provoke the coming war of the elements! And when the rain is over and gone, with what bounding ecstacy do they again burst forth with their joyous songs, apparently joking familiarly with every passer-by! Foul weather is sometimes betokened by cocks crowing in the evening, or at unusual hours; by ducks and geese flying back and forth, and plunging in the water; by the sea-birds hasting to their hiding-places on shore; and by the swallow and martin gliding over the surface of the ground, or lightly skimming the liquid plain, as they dart for the insects which the excessive humidity of the air has driven to its lowest stratum.

Insects are barometers also. When flies and gnats sting, and are unusually troublesome, cold and wet weather may be looked for; but when they form a vertical column in the last rays of the setting sun, fine weather may be expected.

Spiders are, however, probably the surest indicators of weather. When they are idle and listless, neglecting their tattered web, rain or wind may be certainly anticipated; or if they tie up their nets by strong short filaments, firmly bracing it against the perils it will have to encounter. On the other hand, if they are seen busily weaving a slender web, even if it be then raining, permanently clear weather may be relied on.

The leech lies snugly coiled at the bottom of the water in clear, cold weather, but creeps up to the top on the approach of snow or rain; darts about rapidly before a wind, and seems convulsed on an approaching thunder-storm.

Many plants indicate rain and sunshine by the contraction or expansion of their petals. Among numberless ones these may be mentioned: the beautiful gentianella, the germander speed-well, the African marigold, and especially the "poor man's weather-glass," the pimpernal, (*Anagallis arvensis;*) the purple sandwort, (*Arenavia rubra;*) and the chickweed or stichwort, (*stellaria media.*)

Severe winters are indicated by excessive rains during the preceding summer, by the migration of squirrels, and the early flight of birds of passage. A mild, open winter is usually followed by a late spring, and a severe winter is preceded by an unusually productive and abundant harvest. As a general rule, there is nearly an equal amount of rain and heat in the annual seasons, taking them together as constituting a year, and the years, taking 2 or 3 together, nearly correspond, as to the aggregate of wet and dry, cold and heat, productive and barren. Indeed, so uniform is this rule, that we seldom have two successive years of similar extremes, and three such successive seasons would be a phenomenon.

But Solomon says, "He that considereth the wind shall never sow;" and it must be confessed that no one of the foregoing indications are invariable criterions of weather. "One swallow does not make a summer," and we have often seen even the wild geese and birds of passage mistaken in their observations. It is only by comparing several of these prognostics that anything like certainty can be attained.

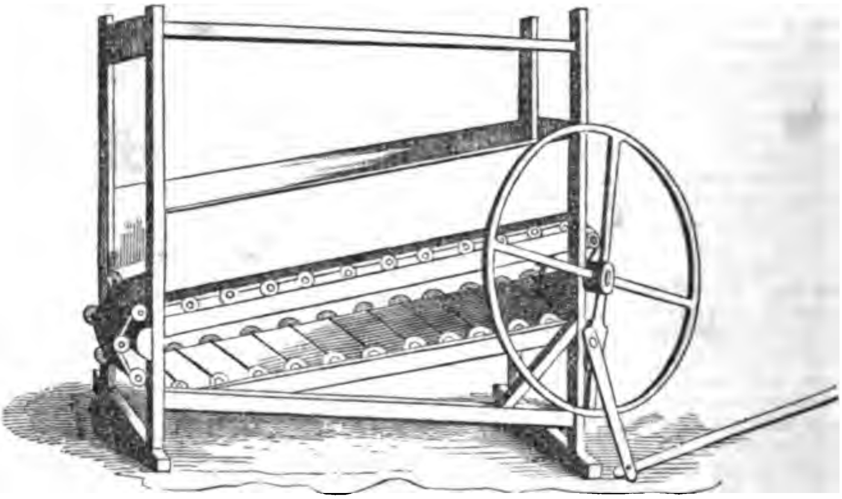
R. L. Allen.

For the American Agriculturist.

DOG-POWER MACHINE.

Newburgh, October 19th, 1843.

Dear Sir: Agreeably to your request, I send you herewith a sketch of the dog or sheep-power machine, manufactured by Thomas Mitchell of this place. One of the machines was exhibited at the late Agricultural Show in this county, as you probably remember, and the committee for its examination, composed of our butter makers well qualified to judge of its merits, gave a very favorable report of it, recommending it as fully equal to any machine heretofore invented; and the society awarded him a premium for it. I have myself seen several of the machines in operation, and am so well satisfied of their superiority over the machines now commonly in use, that I have ordered one for my dairy establishment, in place of the one which I now use. I am certain that they work much easier than our common machines, and as they are cheaper, more durable, and occupy much less room than the others, I deem them more desirable.



Dog-Power Machine.—(Fig. 56.)

The sketch is made for you by Mr. T. M. Niven of this place, and is so simple and plain as to need no description.

Frederick J. Betts.

A friend informs us that he saw this piece of ground previous to plowing, from which Mr. Sotham has raised so good a crop of ruta baga, and that it was literally covered with conch—nothing else did, or could grow upon it. This was all gathered into heaps and burnt, and the ashes strewed over the ground for manure.

For the American Agriculturist.

CULTURE OF RUTA BAGA.

Hereford Hall, near Albany,
September 27th, 1843.

I have about nine acres of ruta baga, which I sowed broadcast, and I verily believe it to be the best system of growing them. I have tried every new and *fashionable* experiment, but after all I prefer the old one, when you have men that understand hoeing them, and I can soon teach a person, if he is *willing to work and observe*; the only difficulty is they leave them too thick.

I can grow a greater weight per acre, and my manure is spread regularly over my soil for the succeeding crop. I plowed a piece of sod the early part of last fall, cross-plowed just before the winter set in, leaving it as rough and as much exposed to the weather as possible. Early in the spring, I harrowed it *thoroughly*, raked up all the conch and burnt it. I plowed it the third time the latter part of May, and gave a second dressing with harrows and rakes, and burnt all the refuse. I then put on about thirty loads of good rotten manure per acre, which had been turned in the mine in the course of the winter and well mixed together, and all pernicious seeds decayed. I plowed it under about four inches deep, and sowed the seed on a fresh furrow. They have grown luxuriantly, and are a very profitable crop for a breeder.

Sir John Terril, in answer to Mr. Everett's remarks in England, said the climate would not allow us to grow Sweeds (ruta baga) in America. I say that better Sweeds can be grown here than in England, under the same culture. I have grown better, and more weight to the acre, and I have cultivated them extensively in both countries, more especially in England.

William H. Sotham.

The following communication was obligingly handed us by the writer at the time of its date; but getting mislaid it was not found till a few days since. As the interest excited last winter in the Oregon Territory continues unabated, we give place to it, and have also appended other matter on the resources of this country, gleaned principally from Parker's Travels. We have the pleasure of a personal acquaintance with Mr. Farnham, and have also read his travels with much interest. He is a shrewd observer, and so far as we are capable of judging, we do not think that he has underrated the Oregon Territory. But we might as well undertake to stay the sun and moon in their course over the peaks of the Rocky Mountains, as emigration to the west by the hardy nomadic population of our country; and the shores of the Pacific, we have no doubt, will soon become the point of attraction for thousands upon thousands of hardy adventurers. Irving's beautiful descriptions of the wild scenes of the Pacific plains and valleys, and the sublimities of the snowy peaks of the Rocky Mountains, have often made us wish to become a wanderer among them.

For the American Agriculturist.

PRODUCTS OF THE OREGON TERRITORY.

New York, May 20, 1843.

Dear Sir: A reply to your request that I would give you a statement of the agricultural capacities of Oregon Territory, has been so long delayed, that I scarcely believe you will find anything which I can now write an available apology even for my remissness, and much less a satisfactory answer to the strong desires of our country, to know whether they may or may not find a golden mountain and a vegetable elysium in that territory.

I despair more in regard to the latter than in the former respect, for I believe that one can scarcely put the finger on a date in the history of man, when extravagance in the expectations of the race was more apparent; so that if I should write the mere naked truth, fortified by the observation of every man who has ever resided a twelvemonth in the territory, the desire to prove a garden of beauty "in the far west," to which our restless and energetic countrymen might emigrate, would find quite as much reason and truth in the dreams of their own wishes, and in the romantic representations in Parker's Travels, and Irving's Astoria, as in any statement which would cool the ardor of their pursuit after the ideal fig-bearing, orange-bearing, grape-bearing, wine-flowing soil of the Oregon.

But as you desire to present the mere truth to your readers, the following extract from my travels in Oregon, &c., will answer your purpose.

In order to obtain a correct knowledge of the agricultural capabilities of the Oregon Territory, it is necessary to refer the reader to the accounts already given of its different sections; to the barren valleys of the Saptin and the Columbia above its junction with the Saptin; to the account given of New Caledonia; and the description of that vast tract of deserts dotted here and there with habitable spots, which occupies the space between the President's range on the west, and the Upper Columbia and the Blue mountains on the east. The remainder of the territory, commonly called the "Low country," is the only portion of it that bears any claim to an agricultural character. This is bounded north by the Straits de Fuca and Puget's sound, latitude 48 degrees north, east by the President's range, south by the parallel of 42 degrees north latitude, and west by the ocean; seven degrees of latitude, and 100 miles of longitude; in round numbers 490 by 100 miles, equal to 49,000 square miles; which is equal to about 31,000,000 of English acres. About one third of this may be plowed, another third pastured. The remainder consists of irreclaimable ridges of minor mountains, crossing the country in all directions. To this should be added Vancouver's island, 200 miles long by 30 in average width, and Washington's or Queen Charlotte's island, 100 miles long by an average of 15 miles in width; in both which may be supposed to be the same ratio of arable pasture, and irreclaimable lands, to wit: 1,550,000 of each. And thus we have a rough, but I believe, a generally correct estimate of the agricultural capacities of Lower Oregon; about 12,000,000 of arable and 12,000,000 of pasture land. The arable land of other parts of the territory, it will be recollected, is so inconsiderable as to be scarcely worthy of mention. There are, I presume, 10,000,000 of acres of pasture land in all the region east of the President's range. Thus we have in Oregon Territory, 12,000,000 acres of arable country. And if we assume the territory to extend from latitude 42 degrees to 54 degrees north, and from the Pacific ocean to the main ridge of the Rocky mountains, an average distance of 400 miles, we shall have a total surface of 215,000,000 acres; 32,000,000, the habitable part, subtracted from this, leaves 183,000,000 acres of deserts and mountains.

The climate of Oregon, also, is unfavorable to great productiveness. From October to April the southerly winds blow, and bring upon the lower country daily and almost incessant rains. From April to October no rain falls; and the exceedingly loose soil becomes so dry, that the grasses wither to hay. On the tract lying between the President's range and the Blue mountains, and the Upper Columbia, a few storms fall in the winter months. During the remainder of the year, neither dew nor rains descend upon it; a brown, cheerless waste. But that portion of it which lies near the streams, will furnish in winter and summer the finest pasture for sheep on the continent. And as the weather is too warm in California and the country farther south to allow beef to be barrelled successfully, and as all the domestic gramniverous animals cut their own food in Lower and Middle Oregon the year round, beef and wool may become profitable staples in that distant territory.

Flax, hemp, and cotton, can be grown in the lower country. There is water-power in great abundance to manufacture them into fabrics for home consumption and foreign markets. Pine and cedar timber promises to be among its most valuable articles of export. Indeed the whole western coast of America, and the islands of the Pacific, New Zealand excepted, will ultimately be supplied more or less with the lumber of this region. The inexhaustible stores of salmon and sardines which frequent the Klamet, Umqua, Columbia, and Frazer's rivers, will constitute another most valuable staple.

Indeed, the agricultural resources of the most valuable section of Oregon, are inferior to those of any of our states or territories in the valley of the Mississippi, and inferior to those of more than half of the territory in the Atlantic states; and Oregon Territory as a whole is, in its soil, the most cheerless and barren portion of the national domain.

Twelve degrees of latitude, and about six degrees of longitude, 800 miles north and south, and 400 east and west, a vast territory; invaluable as an easily defended frontier; as the home of our national and mercantile fleets in the Pacific; and priceless as the termination of a railroad of 600 miles, uniting Puget's sound with the navigable waters of the Missouri, and giving an easy and speedy overland transit for our commerce with China, into the heart of the republic. Its agricultural resources are sufficient for this end; and to this end all its value tends.

THOMAS J. FARNHAM.

New Flax.—The Rev. Samuel Parker in his tour through the Oregon Territory, mentions the spontaneous and prolific growth of flax in that region. He says: "In everything, except that it is perennial, it resembles the flax which is cultivated in the United States; the stalk, the boll, the seed, the blue flower, closed in the day, and open morning and evening. The natives use it for making fishing-nets. Fields of this flax may be mowed like grass, for the roots are too large and run too deep in the earth, to be pulled like ours; and it would save the trouble of cultivating." This is worthy an experiment among our agriculturists. Can any of our readers give us any information of its culture among us?

New species of Wormwood.—The above writer also describes a new variety of wormwood, by some called the wild sage, which grows near the Rocky Mountains where the soil is gravelly and barren. "It grows 8 or 10 feet high, 4 or 5 inches diameter, and is frequently an obstruction to the traveller."

If similar to our wormwood, it would indicate an abundance of *potash* in the soil.

The native fruits of that luxuriant region, he describes particularly.

The Salalberry is a sweet and pleasant fruit, of a dark purple color, oblong, and about the bigness of a grape.

The Serviceberry is about the size of a small thorn apple, black when fully ripe, and pleasantly sweet like the whortleberry.

The Pambia is a bush cranberry.

The Gooseberry has many varieties—the common prickly, which grows very large on a thorny bush; the small white, which is smooth and very sweet; the large, smooth purple; and the smooth yellow, which are also of fine flavor. All of these attain good maturity, and such as grow on the prairies are very superior.

Currants.—There are three varieties; the pale red, the yellow, which tastes well, and the black.

The Snowberry, (*Symphoria racemosa,*) the beautiful shrub which grows in our gardens, is found here wild, and in great abundance.

Raspberries abound in all their varieties; in addition to which, there is a new species growing in the woods. The berry is three times the size of the common, of a very delicate, rich yellow, but the flavor is not so agreeable. This description corresponds with the Antwerp cultivated to some extent in our country.

The trailing Honeysuckle is beautiful and abundant.

The sweet-flowering Pea grows spontaneously, and in great luxuriance.

White and red Clover abound.

Strawberries are prolific, and of peculiarly rich flavor.

Sunflowers are numerous, but of small size.

Broom-Corn, a new variety on the bottom-lands.

Wild grain resembling barley or rye is indigenous.

Roots.—The *Wappatoo* is the common saggitaria or arrowhead, and is found only in the valley of the Columbia, below the cascades. The root is bulbous, and becomes soft by roasting, forming a nourishing and agreeable food, is much used by the Indians, and is an article of trade. It grows in shallow lakes and marshes, covered with water. The *cammas,* a truncated root in the form of an onion, is of great importance to the Indians, and grows in moist, rich ground. It is washed, pounded, and made into loaves like bread, and has a taste resembling liquorice. The *cowish,* or biscuit root, grows on dry land somewhat larger than a walnut, tastes like the sweet potato, is prepared in the same manner for food as the cammas, and is a tolerable substitute for bread. The *racine, amère,* or little root, which grows on dry ground, is fusiform, and, though not pleasant to the taste, is very conducive to health. The *common onion* is found here; and another, characterized by its beautiful red flower, which often grows on volcanic scoriæ, where no other vegetation is seen.

We find in the Batavia Advocate the following synopsis of a letter from one of the Oregon missionaries, dated at Clowewalla, August 26, 1842:—

The writer speaks of the country in the highest terms of praise; says the soil is very fertile, and wheat is raised year after year on the same ground, without any diminution. The crop of last year he speaks of as being the greatest yet raised. Some seventy-five thousand bushels were raised last year. Wheat that shells much in harvesting, he says, will sufficiently seed the ground to raise a good crop without any more being put in. Horses and cattle are abundant, and there is enough to eat for every one. No chance of people starving in Oregon, he says.

From his account there are all kinds of cattle and game. Horses, cattle, and hogs—and elk, deer, bear, wolf, panther, raccoon, fox, beaver, otter, muskrat, mink, &c., &c. Fowls are also abundant—there being the swan, goose, duck, bald and gray eagles, vulture, &c., &c. Among the timber are—white and yellow pine, cedar, hemlock, oak, ash, &c., &c.

Vegetables abound in great variety. There are also berries the year round, including cranberries.

Wheat is worth 60 cents to $1; peas the same; potatoes 40 cents; oats the same; pork $7 to $10 per hundred; beef $5 to $6; tallow 10 cents; butter do.; corn is scarce, and worth from $1 to $1.50. Garden vegetables are abundant, and the country well watered.

From another source which we do not recollect we find the following:—

The Pines of Oregon.—The pine forests are very extensive, the trees being of great size, and the timber extraordinarily beautiful, straight, and free from knots. All the timber of the genus *pinus*, of which there are a great number of species, is gigantic, when compared with our trees in this part of the world; but occasionally one is met with, huge almost beyond comparison. I measured, with Dr. Gardner, Surgeon of the Fort, (Vancouvre,) a pine of the species *Douglassi*, which had been prostrated by the wind: its length was above 200 feet, and its circumference 45 feet! Large as was this specimen, its dimensions are much exceeded by one on the Umptqua river, measured by the late Mr. David Douglass. The height of this tree was, I think, nearly *three hundred feet*, and its circumference *fifty-six feet!* The cones of this pine, according to Mr, Douglass, were from twelve to fifteen inches in length, resembling, in size and form, sugar loaves.

For the American Agriculturist.

THE AGRICULTURE OF CUBA.—No. IV.

San Fernando de Nuevitas, 20th May, 1843.

Dear Sir:—The next object here to which I shall call your attention, is the rearing and management of bees. This business is extensively carried on in many parts of the island, and is usually attended with good success. There are several apiaries containing upward of 2,000 hives of bees, which will produce, on an average, two swarms in a year. The usual way of commencing, is to procure a few swarms at first, and then allow them to multiply to the extent required. No apiary is allowed, according to the existing laws of this country, to be located within six miles of a sugar estate, on account of the danger and injury that would arise from the bees. The hives are commonly formed of sections of hollow trunks of trees, which are laid horizontally about a foot and a half above the ground, with both ends left open. They are usually placed under plantain or other trees, in order that they may be screened from the sun during the hottest hours of the day. As soon as the hives are filled with combs, a portion of the honey is removed from the end opposite to that in which the bees are at work, and then they immediately recommence filling the vacancies thus made, without danger or the loss of the swarms. The honey collected during the spring and rainy months is regarded as unfit for use until it is worked over a second time by the bees, on account of its watery or deleterious qualities, which are supposed to be imparted chiefly from being extracted from poisonous plants, or trees. Two men are counted sufficient to manage 100 swarms, besides being able to attend to the rearing of cattle, the cultivation of corn, tobacco, plaintains, yucca, or other products.

Notwithstanding this rude mode of raising honey, it is made, in many cases, a very profitable business. The annual yield of each hive will sell, when delivered at the place of shipment, for $2. I would suggest that some of the southern agriculturists of the United States, particularly in Florida and Louisiana, would determine whether this branch of industry can not be carried on equally advantageous there.

I shall conclude these communications by giving a short statistical account of the island, which has been gleaned, either from public documents, or other authentic sources.

Census of 1841.

	Males.	Females.	Total.
White	227,144	191,147	418,291
Free colored	75,703	77,135	152,838
Slaves	281,250	155,245	436,495
	584,097	423,527	1,007,624

Persons over 80 *Years of Age.*

Whites	1,175
Free colored	701
Slaves	1,198
Total,	3,074

The official returns of the exports of the island-products, in 1842, were as follow:—

Mahogany	56,161
Spirits from cane	204,550
Cotton	75,834
Coffee	2,998,269
Sugar	11,447,009
Cedar	40,101
Wax	290,828
Copper ore	4,981,405
Hides	21,130
Sweetmeats	7,091
Fruits	49,298
Honey	71,325
Molasses	744,608
Horses and mules	1,205
Cigars	749,812
Tobacco	1,461,760
Other articles	200,241
Total,	$23,400,708

The revenue or taxes of Cuba, in round numbers, is about $12,000,000; $2,500,000 of which go to support the army, $1,500,000 to the navy, $5,000,000 for the civil functionaries, and $3,000,000 are sent to Spain.

The Cubean navy consists of one frigate, one sloop-of-war, two war steamers, six brigs, and eight schooners.

D. Jay Browne.

For the American Agriculturist.

TANNING ON THE PLANTATION.

Ingleside, Miss., Sept. 19*th*, 1843.

Tanning leather, for the use of the plantation, is an item of good management that should not be overlooked by any planter. Nor would it be as much overlooked as it is, if the simplicity of the process was generally known—that process, I mean, that will suffice for making leather for home use. The *tanner* by profession, in order to prepare an article that will command a good price in market, and have a merchantable appearance, puts the hides and skins through a greater number of manipulations; and, that he may work to better advantage, has his arrangements on a more extensive scale.

The vats, tools, and implements, really needed, are few and simple. Four *vats* will generally be found all-sufficient; one for a *pool* of fresh water, and for *baiting;* one for *liming;* another for *coloring;* and a fourth for *tanning*. The best size, in the clear, is seven feet long, four and a half feet wide, and five feet deep. They should be placed so as to be easily and conveniently filled with water from a spring, running stream, or cistern. Dig the holes 9 feet, by 6½ and 6; if the foundation is clay, the depth need not be over 5 feet. Form a stiff bed of *clay mortar* in the bottom, on which to lay the floor, and on it erect the sides and ends of the vat, of plank of almost any kind, sufficiently thick to resist the pressure from without—two inches will be thick enough. When this is done, and the whole nailed fast, fill in the vacant space all round with *well-tempered* clay-mortar, ramming it effectually: it is on this, and not the planks, that dependence is placed for rendering the vat perfect. When well made, a vat will be good for a long lifetime—the *ooze* preventing the decay of any but the top round of plank. Such a vat will hold 15 large beef hides (30 sides), besides a number of small skins.

The material used for tanning, is the bark of the red or black oak, stripped when the sap flows in the spring, stacked and dried—of which about four pounds are supposed to be necessary to produce one pound of leather. There is an article occasionally used, called "catechu," which is an extract made from the wood of a mimosa-tree, a native of India, half a pound of which answers the same purpose. Galls, willow bark, the bark of the Spanish chestnut, and common elm, as also sumach, are all used by the tanner. It has been recently found that the root of the palmetto answers an equally good purpose with the best oak bark.

Bark has to be ground as wanted; or if the quantity needed is small, and it is not thought advisable to incur the expense of a *bark-mill* (from $10 to $18), it may be pounded in a large mortar, or beat up on a block. It will require one third more of *pounded* than of *ground* bark, to afford equally strong *ooze*, which is the infusion of bark.

The principal tools requisite are a *fleshing-knife, currier's knife*, a *brush* like a stiff horse-brush, and a *fleshing-beam*. The fleshing-beam is made by splitting in two a hard-wood stick of about a foot in diameter; inserting two stout legs, some thirty inches long, in one end on the split side, so that the other end rests on the ground, with the round side up, the elevated end being high enough to reach the workman's waist. A fleshing-knife may be made by bending an old draw knife to suit the *round* of the fleshing-beam.

The skins of bulls, oxen, cows, and horses, are called *hides;* those of calves, deer, sheep, &c., are known as *skins*.

Fresh and *dried* hides receive the same treatment, except in the washing process. Those that are salted and dry (and no hide should be dried with less than from two to four quarts of salt being rubbed on the flesh side—dried without salt, it is extremely difficult to soften them), require to be steeped, beaten, and rubbed, several times alternately, to bring them to a condition sufficiently soft for tanning.

Green or fresh hides must be soaked in pure water from 12 to 24 hours, to extract all the blood, &c., and soften the extraneous fleshy matter, which must then be removed—throwing one hide at a time on the fleshing-beam, *grain* or hair-side down, and scraping or shaving it off with the fleshing-knife, which must be somewhat dull or the skin is apt to be cut. They are then put in the *liming vat*, which is supplied with strong lime-water, by filling the vat a little over half full of water, and adding thereto four bushels of unslacked (or of air-slacked) lime, or at the rate of ¼ of a bushel of lime to the barrel of water. This will suffice for fifteen hides; each time that they are removed and a fresh lot of hides put in, add another bushel of lime, which will keep up the strength for a twelvemonth. Before using, stir the lime well up, and while it is thus mixed with the water put in the hides evenly, so that the lime will settle on every part of them. They are to remain here from ten to fifteen days, or for three or four days after the hair will rub off with the finger completely and with ease. While in the liming-vat, they must be moved up and down every other morning, to expose them to the air, and to the equal action of the lime. Being now ready for unhairing, cut each hide in two, by slitting them along the centre of the back with a knife, forming them into *sides*. Throw ten or twelve of these sides on the fleshing-beam, and strip the hair off with the knife; and as they are unhaired, throw each one into the vat of fresh water to bait or soak. When the lot of sides and skins in hand have been all unhaired and thoroughly washed, throw them again, and at once, on the fleshing-beam, with the *grain* or *hair* side up, and *work them over* (rub and press them) with the knife until all the gummy or mucilaginous matter is worked out. This should be repeated two or three times during ten or twelve days, being each time baited anew in fresh water. And this *working over* must only be done when the sides feel soft and smooth to the touch; as they will at times, from some unexplained cause, feel rough, at which time they must not be *worked over*. While they are thus *baiting*, they must not be neglected, or they will soon spoil. Tanners are in the practice of adding 1000th part of sulphuric acid (oil of vitriol) to the last *bait*, which has the effect of swelling the pores and distending the fibres, and thus rendering the skins more susceptible to the action of the ooze: forty-eight hours generally suffice for this last *baiting*.

In the meantime, some good strong *ooze* should be prepared for the first *tanning* process, called *coloring*. Fill a vat a little more than half full of water, and add bark, in the proportion of 1½ bushels of *ground*, or 2 bushels of *pounded* bark, to the barrel of water, which will bring the vat up to about two thirds full. When the bark has soaked from four to five days, the sides are put in, and allowed to remain 15 days; during which they must be *once* well and carefully *fleshed* and *worked over*, and must be drawn up and down every morning, for the first week at least, and the bark well *plunged* or stirred up, to have them *color* evenly.

After this, the vat being now two thirds full of this same *ooze*, after drawing out the hides, lay a good coating of fresh bark, of say an inch thick, on top of the water, on which it will float; lay on this a side, spread out evenly; and if it has to be lapped over in any part, lay on more bark until it is all well coated, taking care to place those hides at the bottom of the vat now, that were at the top last time. On this side lay an inch-coating of bark, and on that another side, and so on, with alternate layers of bark, until the vat is full, or the sides all laid away.

In this, which is called the *first bark* the sides must lie four weeks. They are then drawn out, and the spent-bark taken out with a *skimmer* or *drainer*. The sides are then replaced as before, with alternate layers of fresh bark, in the same ooze, which has acquired some additional strength, notwithstanding the amount of tannin and extractive matter, contained in the bark, that has become intimately combined with the animal fibre of the hide. In this *second bark* they remain six weeks undisturbed, when they receive a *third bark*, in the same way, in which they are left another six or eight weeks. Three *barks* will suffice to tan deer, hog, calf, and other small skins; four *barks* will make good sole leather, but five are preferable.

The *tanning* process being completed, *sole* leather is taken out of the vat, rinsed effectually, and dried in the shade, hanging the sides up by two of their corners to joists, where they may remain until wanted. Those sides intended for upper and harness leather, (which are those of cows, &c.—the largest and thickest bullock hides being used for sole leather), as also deer, hog, and other small skins, being thoroughly rinsed, are spread out on a strong table, with the grain or hair side up, and scoured with a stiff brush, like a very stiff horse-brush, occasionally throwing on pure water, until *all the ooze* is scoured out. Tanners use the edge of a stone, made smooth, to assist in rubbing out the ooze, and all the water that can possibly be rubbed out. They also use what they call *a slicker*, being a dull edge of copper of about six or seven inches long, set in a piece of wood, to serve as a handle.

After they are all served thus, and rubbed as dry as possible, the table is cleaned off, and the skins thrown back upon it, *grain side* up, and are rubbed with tanner's oil (cod-fish oil), as long as the leather will receive it. Harness leather must be completely saturated. As they are oiled, fold them up and lay them aside. When they are all gone over, lay one on the table at a time, *flesh* side up, and with a rag rub on all the *dubbing* that the leather will absorb. Thin hides require but a small quantity; harness leather must have a heavy coating.

Dubbing, which consists of equal parts of tar and tallow, melted together, and well mixed, must be made the day previous to being used. Lard *may* be used in place of tallow, but will require a lesser proportion of it. Each side of leather is then hung up by two corners to joists, there to remain until perfectly dry, or until wanted.

If iron or steel touches a hide during the process of tanning, when in the least wet, or even moist, it will discolor it, forming an indelible black mark.

To *blacken* harness or other leather, take the skin when completely dried, and if any greasy spots appear, showing that more oil or dubbing has been applied than the leather could absorb, wet the spots with a little strong ooze, and scrub them out with the brush. Then apply a good coat of *copperas* (sulphate of iron) dissolved in ooze, until the leather has a good color all over. After this, when dry, put on another good coat of oil. The leather may then be smoothed off with a rounding edge of polished steel, or glass, or stone.

T. Affleck.

For the American Agriculturist.

CHALLENGE OF HEREFORD CATTLE.

Hereford Hall, near Albany,
September 10th, 1843.

I have had a number of breeders from all parts of the United States to view the Herefords, and most of them say they are *agreeably* disappointed; they expected to see, from what they had heard and read of them, coarse, plain animals. Now, sir, to remove this erroneous impression, and to place them in a position for proof, I will show six to ten breeding cows, and a bull, all *pure Herefords*, for beauty, symmetry, quality, milking, and activity for breeding working oxen, against a similar number of any breed in the United States, for a silver tankard, value $50, and meet the acceptor half way. I do not do this to "*brag*," but to defend.

William H. Sotham.

SHOW AND FAIR OF THE N. Y. S. AG. SOCIETY FOR 1843.

[Continued from page 234.]

THRASHING-MACHINES.

1st, to Joseph Hall, of Rochester, 6 to 8-horse-power thrasher and Pitt's cleaner and separater	$20
2d, to J. Hale, of North Bloomfield, for 2-horse-power tread-machine and thrasher	10
3d, to Benjamin M. Freeborn, of New York, for a 2-horse-power, with a machine which thrashes over the cylinder	Vol. Tr.

The clover-mill of Mr. Thos. D. Burrall, of Geneva, appears to be a very perfect machine in its construction, and, from evidence produced to the committee, performs its work with great perfection. It can be worked with any ordinary horse or water power: costs 60 to 70 dollars. The committee award a diploma.

FANNING-MILLS.

1st, to A. S. Patterson, of Rush, Monroe co.	$8
2d, to A. P. Dickey, of Elba, Genesee co.	5
3d, to Stephenson & Myers, Port Byron, Cayuga	Vol. Tr.

These are also very important implements for the farmer and grain-grower; and we know of no article, from the old Dutch corn-fan, and the rude, imperfect mill of thirty years past, that has advanced to a state of such perfection as was exhibited at this great fair. There were a dozen or more present, and it was little better than a hap-hazard guess to say which deserves the preference—some excelling in one point and some in another; so that the committee have not the greatest confidence in their decision, especially as they did not see many of them in operation, and the committee were not unanimous in their conclusions. Among those to whom premiums were not awarded, the committee would mention, as deserving commendation, Mr. Heffron, of Venice, Ontario co.; Messrs. J. Patterson & Co., Rush, Monroe co.; Messrs. Long & Stone, York, Liv. co. Some of these were provided with double and treble screens, to meet all contingencies.

HORSE HAY-RAKES.

These are highly valuable labor-saving implements, performing with one man and a horse the labor of 6 or 8 men, and at a time when labor is most valuable. Several of excellent construction were offered. The committee awarded premiums as follows:—

1st, to Lewis Swift, Clarkson, Monroe co.	$8
2d, to Geo. W. Wiggins, Lima, Liv. co.	5
3d, J. Holbrook, Penn Yan, Yates co.	Diploma.

STRAW-CUTTERS.

In this article the committee were utterly confounded, so numerous and various were the plans and contrivances for performing the labor required. They have, however, generally given the preference to the *straight and plain* cutting edge, and therefore award the premiums as follows:—

1st, to Nathan Parish, of Rush, Monroe co., (Israel Patterson's patent)	$8
2d, to Joseph W. Webb, of Rochester	5
3d, to Robert P. Gibson, of New York	Vol. Tr.

FIELD-CULTIVATORS AND GRAIN-COVERERS.

These are desirable implements, not as yet in general use among farmers, but must eventually prevail, as they save full one half the labor in summer fallowing, and are a great improvement over the harrow in covering grain. The committee award as follows:—

For the best Cultivator and grain-coverer, to Harlow Mitchell, of Rutland, Jefferson co.	$8
2d, to Carmi Wright, of Adams, ditto ditto, for corn, &c.	5
3d, to B. Langdon, of Troy, ditto for weeding and hilling corn, and digging potatoes	Vol. Tr.
To S. W. Cool, Geneva, for a field-cultivator and grain-coverer, combining many desirable qualities	Diploma.

To Marcus Adams, of Adams Basin, Monroe co., for a cultivator for corn and root-crops, made entirely of iron, very ingeniously and mechanically constructed, and, as far as the committee could judge without trial, a very desirable implement of husbandry.

HARROWS.

For the best harrow, to Marcus Adams, of Ogden, Monroe co., hinge drag, with iron frame	$8
2d, to Alexander Thompson, Manchester, Ontario co.	5

GRAIN AND SEED-DRILLS.

1st, to Abraham Randall, Verona, Oneida co., for grain-sower and planter	$8
2d, to Newell Adams, Boston, Mass., for seed-drill—Lewis' patent "Yankee corn-planter"	5

MISCELLANEOUS.

To C. Goss, of Madrid, St. Lawrence co., for a superior adjusting grain-cradle, of low price and good workmanship, a discretionary premium of	$5
To William Gates, of Barre, Orleans co., for a new and singular contrivance for raking grain, a discretionary premium of	5
To Julius Hatch, of Rochester, for a machine for sowing grain, plaster, and grass seeds, broadcast	—

[This valuable machine having been previously exhibited, and a premium awarded, was excluded from competition by a rule of the society.]

To Wm. G. Booland, Little Falls, Herkimer co., agent for Bird & Wells' patent smut-machine, manufactured at Trenton, New Jersey	Diploma
To H. H. Everts, of Rochester, for a straw and root-cutting machine, a discretionary premium of	3
To L. Bostwick, of New York, for a portable grain mill, worked by horse power, a Diploma and	Vol. Tr.
To T. R. Hussey, of Auburn, Cayuga co., for a corn and cob-crusher, by horse power, discretionary premium of	$5
To H. H. Davison, of Rochester, for a valuable contrivance for fixing the scythe to the snaith	Vol. Tr.
To Samuel Mallory, of Alexander, Genesee co., for a rut-scraper, to dress roads and fill ruts, discretionary premium of	$5
To A. L. Blanchard, of Albany, for a beautiful and ornamental statue-stove, for burning wood and coal, combining the emission of heated air, discretionary premium of	$5
To Jirah Wing, of Hume, Allegany co., for a model for a cheap, plain, and durable eave-trough, for	

barns, back buildings, and sheds, a discretionary premium of	$5

For the committee,
L. B. Langworthy, *Chairman.*

BUTTER AND CHEESE.

For the best sample of butter, not less than 80 lbs., a premium was awarded to H. Morrison, of Orange co.	$8
2d, to A. D. Porter, of Canandaigua, Ontario co.	5
3d, to D. Wood, West Bloomfield, "	5
4th, to Wm. Sternberg, Henrietta, Monroe co.	5
5th, to Isaac Seely, " "	4
6th, to D. Piffard, of Piffardiani, Liv. co. 2 Vols. and	2
7th, to E. S. Bartlett, of Romulus, Seneca co.	3
For the best cheese, to Thomas Burch, Little Falls, Herkimer co.	$8
2d, to Perez Hathaway, Farmington, Ontario co.	7
3d, to H. Arnold & Son, Hamburgh, Erie co.	6
4th, to Jerome Ives, Hownsfield, Jefferson co.	5
5th, to Newberry Bronson, Warsaw, Wyoming co.	5
6th, to John Lapham, Farmington 2 Vols. Tr. and	2

[Several lots of butter were so nearly alike, that the committee could not agree which should have the preference; they therefore divided the premiums among them equally. The report of the committee was inadvertently sent to Albany before we had copied the remarks.]

MAPLE SUGAR.

The committee on maple and cornstalk sugar respectfully report, that only four specimens of maple sugar have been presented to their consideration, of which one by Joel Woodworth, of Watertown, Jefferson co., is of very superior quality, both on account of its whiteness, approaching to the best refined loaf sugar, and on account of its excellent grain and flavor. They award the first premium of $15.

The second premium of $10 they award to David Dow, of Batavia, Genesee co.

The third and fourth premiums they do not award, because the *quantity* presented by Asahel Dow, of Bethany, Genesee co., and Charles A. Higgins, also of Bethany, was so small as not to come within the rule of the society, requiring 50 lbs. of sugar as the quantity to be presented to entitle to a premium.

The committee have great pleasure in stating that Mr. M. Adams, of Ogden, in Monroe co., has gone into the experiment of manufacturing sugar of cornstalks; and for that purpose has been cutting, during the present season, one acre of the "eight-rowed yellow northern corn;" he has constructed an iron mill for crushing the stalk and expressing the juice, which answers the purpose admirably; but it is yet too early in the season to know the result of the experiment, as a part only of the cornstalks have been gathered and manufactured, and the remainder are yet standing in the field.

Mr. Adams has, however, already made about 400 wt. of sugar, a sample of which he has submitted to your committee, and which, though not yet clarified, appears to be of a fair quality, capable of equalling the best of sugar made from the cane. The stalks still on the ground he thinks will make 400 wt. more sugar; but had it not been for the excessive drought which has prevailed in his section of the country, he is satisfied that the acre planted and experimented upon by him, would have produced 1000 weight of sugar, which was the rate yielded by two rods of the land which he measured off, the proceeds of which he worked up by itself.

Upon the whole, Mr. Adams is perfectly satisfied that sugar can be made in this part of the country, from cornstalks, of superior quality and flavor, and equal in every respect to the best sugar made from the cane, *and so as to remunerate well for its manufacture.* He proposes, at the next meeting of the society, to present a full report of his present experiment, and your committee have great confidence that it will be of such a nature as not only to entitle Mr. Adams to the premium offered by the society, but to the praise of being the first to carry into actual operation an experiment that has been anticipated as the source of great wealth and benefit to the agricultural interests.

John Greig,
Roswell Randall, } *Committee.*
A. B. Dunlap,

REPORT ON VEGETABLES.

Competitors' Names, and Articles offered.

Hugh Mulholland, Brighton, fine, long, blood beets, potatoes, parsneps, carrots, onions, cabbage, and purple egg-plant.

Wm. Hamilton, beets, tomatoes, onions, parsneps, and pumpkins.

J. Medberry, Valparaiso, winter squash.

H. N. Langworthy, winter crook-neck squashes, 12 varieties of seedling potatoes, water-melons, fine sample of pink-eye potatoes, a new variety of musk-melon, of exquisite flavor; specimens of a variety of Spanish tobacco, the seed of which was received from Mr. Ellsworth, of the patent office, some of it growing and some partially cured, of fine appearance, the quality not yet tested.

Samuel Ashton, white field-carrots, celery, table-beets.

Ira Lee, onions, beets, and samples of seed corn.

Nathaniel Hayward, sweet corn, blood and turnep-beets, Meshannock potatoes.

John Adams, white and red cabbage, onions, and tomatoes.

C. F. Crosman, sweet corn, blood beets, of extra length, white field-carrots, summer, crook-neck, and scollop squashes, onions, and Bassano beets.

Theodore Backus, onions, cabbages, and winter squashes,

John Donnellan, Minorca musk-melons, and cabbage.

E. Waugh, leeks, celery, and curled parsley.

Richard Cooper, curled parsley, carrots, white solid celery, melons.

James Bradford, tomatoes, parsneps, celery, 2 varieties of potatoes, and vegetable oysters.

Wm. Webb, beets, curled parsley.

Alfred Fitch, pink-eye potatoes.

C. S. Walling, several varieties of beets.

Michael Elsenbech, fine specimens of cabbage, potatoes, ruta-baga, and turneps.

[The above were products of Rochester and Monroe.]

E. Murdoch, Le Roy, Genesee co., seedling potatoes.

James S. Wadsworth, Geneseo, 12 ears of seed corn, very long; good specimen of Lima beans, tomatoes.

Arthur H. Steen, Mount Morris, Lima beans, tomatoes, and egg-plants.

Oliver Phelps, Canandaigua, 5 samples of potatoes, red celery, winter squashes, and pumpkins.

Wm. Blossom, Canandaigua, celery and onions, a sample of rice-corn grown in the open air.

Hiram E. Hotchkiss, Lyons, Wayne co., varieties of musk-melons.

Abner Bryant, Black Rock, early Bassano, white turnep, and long blood beets, onions, carrots, parsneps, tomatoes, celery, crook-neck and summer scollop squashes, early golden Sioux corn.

Elihu Tyler, Buffalo, tomatoes.

[Several lots of fine vegetables are omitted, because they were not labelled, and the owners were not known to the committee.]

PREMIUMS AWARDED.

Hugh Mulholland, Brighton, for 2 best purple egg-plants	$1
The same, for the 3 best heads of cabbage	1
Nathaniel Hayward, Brighton, 12 best blood beets	1
The same, for the best half-peck of potatoes	2
H. N. Langworthy, Irondequoit, for the best crook-neck winter squashes	1
The same, for the best water-melons	1
The same, " best musk-melons	Vol. Tr.
The same, " best twelve varieties seedling potatoes	Diploma.
Alfred Fitch, Riga, 2d best half-peck of potatoes	$1
Wm. Hamilton, Rochester, best 12 parsneps	1
The same, best pumpkins	1
C. F. Crosman, Rochester, best table summer scollop squash	1
The same, 2d best seed sweet corn	1
The same, best white field carrots	Vol. Tr.
Richard Cooper, Rochester, best celery	$2
E. Waugh, Rochester, best curled parsley	1
Michael Elsenbach, Rochester, fine specimens of cabbages and potatoes, discretionary premium of	1
E. Murdoch, Le Roy, best half-peck seedling potatoes	5
James S. Wadsworth, Geneseo, 12 ears best seed corn	1
Arthur H. Steen, Mount Morris, half-peck best Lima beans	1
Wm. Blossom, Canandaigua, fine specimen of rice corn, discretionary premium of	Vol. Tr.
Elihu Tyler, best 12 tomatoes	$1
Abner Bryant, Black Rock, best table onions	1
The same, best table carrots	1
The same, fine early Bassano beets	Vol. Tr.

REPORT ON FRUIT.

The committee on fruits have the gratification of reporting, though the year has proved very unfavorable, a greatly increased collection in comparison with former years, both in the variety and extent of the products of the fruit garden. Among the contributors are the following:—

Oliver Phelps, of Canandaigua, who presented 27 varieties of apples and a collection of pears.

David Thomas, Cayuga county, (presented by Thomas & Smith, of Macedon,) 48 varieties of the apple, 36 of pears, 10 of peaches, 5 of plums, 2 of nectarines, and other fruits.

Abner Bryant, Buffalo, 12 varieties of apples and miscellaneous fruits.

Benjamin Hodge, of Buffalo, 42 of apples.

Nathaniel Hayward, Brighton, 23 of apples and grapes.

Dr. Armstrong, Rochester, specimens of plums.

Charles Marchant, Greece, 36 of apples.

John Hiler, Penfield, 9 of apples.

Hiram Robbins, Penfield, apples and plums.

Joseph Christopher, apples.

Elihu Tyler, Buffalo, a collection of grapes, apples, and peaches.

Ellwanger & Barry, a large collection of apples and pears.

Wm. Otis, Gates, Monroe co., 14 varieties of apples.

Samuel Moulson, Rochester, a miscellaneous collection of fruits.

Zera Burr, Perinton, Monroe co., fine seedling apples and quinces.

Robert N. Brown, Greece, 12 varieties of apples.

E. C. Frost, Catharines, Chemung co., 3 varieties of pears.

L. E. Lapham, Yates co., apples and pears.

C. M. Eames, New Hartford, Oneida co., fine specimens of the lemon, presented by Jacob Gould, Rochester.

Wm. Mervine, Utica, fine sweet-water grapes.

Marcus Morse, Rochester, peaches and grapes.

Mrs. Marshall, Rochester, several varieties of plums, and Columbia and other peaches.

Abraham Vought, Mendon, plums.

Henry Deyo, Greece, peaches.

Jonathan Buell, East Bloomfield, seedling apples (the Early Joe.)

J. W. Smith, Rochester, fine Isabella grapes, well ripened in the open air, and good new seedling peach.

J. A Hadley, quinces.

T. H. Rochester, pears.

Jas. S. Wadsworth, very fine grapes and pears.

Jacob Gould, Rochester, plums and pears.

Harry Pratt, Rochester, collection of fruits.

Thos. H. Hyatt, Rochester, peaches, apples, and pears.

L. Jenkins, Manchester, Ontario co., pears (Seckel and Virgalieu.)

——— Avery, Rochester, pears.

Wm. Sternberg, grapes, &c.

Charles H. Carroll, Groveland, Livingston co., seedling peach.

Isaac Moore, Brighton, peaches and pears.

S. Vanderniter, Buffalo, bottled gooseberries.

Isaac Hills, Rochester, 8 fine varieties of plums.

E. Scrantom, plums and peaches.

H. V. B. Schenck, fine peaches.

Joseph Medberry, plums.

M. A. Norton, Victor, pears.

H. G. Hotchkiss, Vienna, fine grapes of several varieties, all grown in the open air, and excellent peaches.

Sidney Allen, Rochester, grapes, peaches, and pears.

H. N. Langworthy, peaches and grapes.

The great number of collections presented has prevented a thorough examination of the many varieties composing them, as well as an enumeration of the names.

The committee have made the following awards. Where members of the committee were competitors, they were not consulted in the decision. The committee, also, as a matter of course, excluded those collections not cultivated by the contributors themselves.

For the greatest variety of table apples, David Thomas, Cayuga county.

For the second greatest variety, Benj. Hodge, Buffalo.

For the third greatest variety, Oliver Phelps, Canandaigua.

For the best twelve sorts of table apples, Abner Bryant, Buffalo.

For the best new seedling apple (the Early Joe), Jon. Buell, East Bloomfield.

For the greatest variety of table pears, David Thomas, Cayuga co.

For the greatest variety of winter pears, the same.

For the best twelve quinces, Nathaniel Draper, Brighton.

For the best twelve peaches, H. G. Hotchkiss, Vienna.

For the best twenty-four plums, Isaac Hills, Rochester.

For the best six bunches native grapes, J. W. Smith, Rochester.

For the best six bunches foreign grapes, Elihu Tyler, Buffalo.

The committee recommend a discretionary premium of a volume of Transactions to J. W. Smith, of Rochester, for his fine collection of grapes and other fruits. Though the specimens of pears were numerous, they did not consider any one collection sufficiently extensive to deserve the second premium. Respectfully submitted.

JOHN J. THOMAS,
BENJ. HODGE,
N. GOODSELL, *Committee.*
IRA DOTY,
J. R. MURRAY,

ON SILK AND COCOONS.

The committee on silk report, that the exhibition of cocoons and reeled silk was very extensive and highly creditable. There was a great variety of specimens of manufactured silk, many of them very handsome; and the whole exhibits a highly gratifying improvement in this branch of American industry.

They have awarded to Mrs. E. M. Reed, of Rochester, a premium of $15, for the best half-bushel of cocoons.

To Justus Beardsley, of Perinton, Monroe co., for the 2d do.	$10
To Mr. B. Brown, of Ogden, Monroe co., 3d do.	5

The committee being unable to discover any preference in the following, have awarded to Edward Stanley of Ogden, John Adams of Ogden, and E. Murdock of Le Roy, each $3 and a copy of the Volume of Transactions.

To N. D. Hart, of Le Roy, for the best reeled silk	$15
To John Adams, of Adams Basin, for 2d do.	10
To James M. Hathaway, of Bristol, 3d do.	5
To Samuel R. Tracy, Newark, Wayne co., 4th do.	Vol. Tr.
To Mrs. D. Carter, of Bloomfield, for the best specimen of manufactured silk (gown silk)	$15
To David Irish, of Perryville, Madison co., for the 2d do. (sewing silk)	16
To Mrs. J. Howe, Avon, 3d do. (sewing silk)	$5
To Edwin Stanley, 4th do. (sewing silk veil)	Vol. Tr.
To Mrs. Raymond, for silk cape	$2
To Eliza B. Orcott, of Centreville, for silk hose	2
To Mrs. Roswell Carter, of Albany, for a net-silk shawl	2
To J. Haskins, Le Roy, for a ball of twist	2
To Benjamin M. Benedict, of Bergen, Genesee co., for sewing silk	2
To Enos Holmes, of Clarendon, for sewing silk	2

There were but two silk reels exhibited, and neither being superior, or showing any new improvement, they have awarded to Edward Stanley of Ogden, and Seneca Reed of Greece, each a Volume of Transactions.

There was a great variety of manufactured articles exhibited, and deserving a more extended notice than it is in the power of the committee to give; and some few specimens had lost their labels, among the latter of which was a very handsome specimen of twist.

A beautiful sample of sewing silk was exhibited by P. Staats, of Buffalo; silk fringe and mitts, by Miss Julia M. Backus, of Rochester; silk hose, by Mrs. E. M. Leech, of Lima; silk vesting and apron silk, by Edwin Stanley; handkerchiefs, hose, pic-nic gloves, and mitts, by Mrs. Carter, of Bloomfield; silk hose, by Mrs. Franklin Darrow, of Darien; silk-net handkerchiefs, by Mrs. Lydia Murphy, East Avon; gloves and handkerchiefs, by Ira Philips, Clarendon.

The committee recommend that hereafter a clerk be specially assigned to take charge of and keep in order this branch of the exhibition.

O. HUNGERFORD,
T. MELLON,
WM. KIDD, *Committee.*
H. O'REILLY,
M— LANE,

REPORT ON PLOWS.

The committee on plows would respectfully report, that they have attended to the duties assigned them, which, the society are aware, were neither few nor small. We have the satisfaction, however, of acknowledging that we were furnished every facility for testing the traction of plows by the competitors, who, we are happy to say, manifested a very laudable zeal in rendering us every assistance in our work; and although laboring under the strong excitement incident to a competition for the highest prizes offered by the society, and upon an article most important to the farmer, treated each other and the committee with a degree of urbanity highly creditable to this class of mechanics. We had the use of four dynamometers—one belonging to the society; one upon the same construction, but a better instrument, furnished us by S. W. Chase, of Amsterdam; one of a spiral construction, numbering as high as 1,200 pounds, but not sufficiently minute for our purpose, by G. D. Avery, of Chenango county; and another, the most serviceable, invented by A. K. Cone, of Batavia, called the "scale-beam dynamometer." Mr. Chase also kindly furnished us a windlass and small wheels, ropes, &c., and Mr. Avery, pulley-blocks, measures, &c., which very much expedited the business before us, and for which we would tender them our thanks.

TRIAL OF PLOWS.

On the morning of the 22d, we were met by a large number of those interested in the manufacture of plows, and proceeded to the trial with the dynamometer. Each plow was drawn by a windlass through a stiff sward, the distance of five rods, and required to cut a furrow twelve inches wide by six deep.

The following plows were tried, and the average of their resistance taken as indicated by the dynamometer:—

Names of Ploughs.	Makers or Patentees.	Pounds draught.
American,	M. H. Codding, Bristol, Ontario co.,	330
Cayuga county,	P. D. Wright, Rochester,	388
Worcester county,	E. Davis, Watertown, Jefferson co.,	386
Diamond,	H. Delano, Mottsville, Onondaga co.,	365
Peekskill,	T. Mercer, Peekskill,	348
Williamsport,	S. W. Hall, Williamsport, Penn.,	337
Montgomery county,	S. W. Chase, Amsterdam,	255
Do. [larger size,]	do.	375
Opposition,	C. Seymour, Lockport,	397
Washington,	I. S. Teft, Williamsville, Erie co.,	381
Oxford,	Oxford, Chenango co.,	371
Ontario county,	R. C. Stiles & Co., East Bloomfield,	431
Veto,	I. Waite, Albion,	335
Wyoming county,	Hicks & Bailey, Perry, Wyoming co.,	363
Oneida chief,	E. Wilson, Vernon, Oneida co.,	381
Caledonia,	P. Elyea, Caledonia, Livingston co.,	345
Middleport,	I. Van Brenklen, Middleport, Niag. co.,	436
Eagle, [Mass.]	Ruggles, Nourse, & Co.,	415
Geneva,	T. D. Burrell, Geneva,	397
Do. [shell wheel],	do.	298
Do. [Scotch shell-wheel]	do.	325
Locklin improved,	I. C. Fitch, Dansville, Livingston co.,	463
Iron-beam,	E. Richardson, Bushnell's Basin,	388
Livingston county,	H. Wiard, Avon,	400

We ought here to observe, that some of these plows were of a larger size than others, and their surface-draft, of course, greater; as the Livingston county, Ontario county, and some others. Some of them were highly polished, while others were nearly as rough as they came from the moulds. Some were provided with very sharp coulters, while others had merely a cutter upon the shin, which made a very manifest difference. Many of them came unprovided with a gauge-wheel; and the difference of draught was so great with or without a wheel, that those who had not a wheel, borrowed one before they would go through with a trial. Your committee think this point settled in the minds of every one who saw this trial, that a wheel is an indispensable accompaniment to a good plow in sward land, or indeed in almost any other. There was also a difference in the dynamometer, as Mr. Chase's, which was injured after the trial of four or five plows, indicated every ten pounds, while the scale-beam, afterward used, indicated only every thirty pounds.

After we had gone through with a very thorough and laborious trial with the windlass and the dynamometer, we proceeded to try them with a strong pair of horses. Each competitor was allowed to hold his own plow until it run to suit him, and then it was held by one of the committee. We gave them a thorough trial in this way, and proceeded to compare their relative merits as to construction and workmanship, and heard explanations of their peculiar merits, from their proprietors.

Having thus obtained what information we could as to their traction, and compared their relative merits as to construction and durability, your committee came to the unanimous conclusion, that we could not award premiums as published by the society. We are not prepared to say, neither do we believe any judicious man would say, that either of these plows was so superior to the others, as to entitle it to the large premium of fifty dollars. They were all superior plows; and the more we examined them, the more we were convinced that such a collection was never seen before, in this or any other land.

We therefore proceeded to divide the highest premium among the largest-sized plows, giving the

Caledonia, P. Elyea, of Caledonia	$25
Wyoming, Hicks & Bailey, Perry, Wyoming co.	15
Williamsport, S. W. Hall	10

The remaining premiums are divided among plows of the second size, as follow:—

American, M. D. & M. H. Codding, of Bristol, Ontario	$15
Geneva, T. D. Burrell, of Geneva	12
Montgomery county, S. W. Chase, of Amsterdam	10
Oneida chief, E. Wilson, Vernon, Oneida co.	8
Veto, I. Waite, Albion, Orleans	5

We also recommended that diplomas be given to the iron-beam and Peekskill, and volumes of the Transactions to the Livingston county, the Cayuga county, and Diamond plows.

Your committee also witnessed with great satisfaction, the trial of a plowing-machine, or gang of plows, constructed by Thomas Wiard of Avon, and have no hesitation in recommending it as an article of much importance to the farmer. The facility and great rapidity with which it prepares fallow grounds, plows in wheat, covers peas and other spring grain requiring a deeper covering than the harrow gives, renders it a very desirable article to the farmer. We had not only ocular demonstration of its performances, but were shown very high commendations from some of the best farmers of Livingston county. We therefore recommend the awarding of a diploma to Thomas Wiard, of Avon, for his gang of plows.

Of sub-soil plows, only two were presented, both of which were thoroughly tested and highly approved by the committee. We believe the subsoil plow worthy of a trial by our farmers, and an instrument which will do great service in heavy clay lands, and such as have impervious sub-soils. We feel that we could not do justice to either of these plows, by giving them the whole premium. We therefore have awarded to B. F. Smith, of Syracuse (Ruggles & Co., Mass.), $12, considering his plow superior in workmanship, and that it will do the best work in lighter clay soils. We award to S. McLean, of Royalton, Niagara county, $8, for his sub-soil plow, the construction of which is very simple, is so cheap as to be within reach of every farmer, and will work its way through the heaviest soils.

In closing their report, your committee would beg leave to suggest that a suitable premium be offered for the best dynamometer. The instruments now in use are very imperfect, and no certain test of the power required in the draught of a plow. Such is the continually-varying resistance given by the inequality of the earth's surface, and the obstacles under it, that the index of the dynamometer revolves as rapidly as a weathercock in a storm. We want an instrument not so easily affected, or farther removed from continual fluctuations, which will note in single pounds the average power required in a given number of feet. Yankee ingenuity has evidently not been sufficiently employed in the construction of this instrument; and we are persuaded it needs but little encouragement from your society, to stimulate it to the production of an instrument which will render the power required in the draught of a plow, as easily determined as the power of a locomotive.

All of which is respectfully submitted, by your humble servants,

Myron Adams,
C. S. Button,
L. B. Langworthy,
R. Harmon, Jr.,
} *Committee.*

Rochester, September 23, 1843.

The Plowing Match.

1st, to J. Howell, Chili, Monroe co.	$15
2d, to W. Utley, Phelps, Ontario co.	10
3d, To Wm. Craig, York, Livingston co.	5
4th, to George Sheffer, Wheatland, Monroe co.	Vol. Tr.

From the American Agriculturist Almanac.

NORTHERN CALENDAR FOR NOVEMBER.

It is now time to close up the operations of the warm season, and provide for the cold. Finish collecting in all your crops, corn, turneps, cabbages, &c., and see that your cellars are well secured against frost, and your granaries against depredators. Finish the fall plowing. All clay land should be thrown into ridges for the action of the frost. One good plowing on such land in the fall, is worth two or three in the spring, and as this soil has a great affinity for ammonia while thus exposed, it will absorb large quantities of it brought down in the winter and spring, by the snows and rain, which it will yield to the crops the ensuing season. Examine the winter grain, and any water-furrows which have become choked up, let them be opened. *Standing water will kill any useful vegetable,* excepting rice.

The yards should be well bedded with turf, peat, or muck, weeds, refuse straw, and other vegetable matters; and so constructed that the soluble parts of it, which are the best, shall not be drained off to help inundate the roads and ditches. If time permits, drains should be made to carry off the latent water, which destroys the crops, or diminishes them so much as hardly to pay for the raising. Under-ground, in preference to surface drains, should always be constructed, unless large quantities of water are required to pass. Give all your roots in heaps for the winter, an additional covering before the ground is frozen. Have all the barns and sheds well covered and mended, and the racks and mangers all tight, and in order, that no hay or provender may be wasted. Before the ground is frozen, look well to your fences. No meadows, winter grain, or even pastures, should be exposed to poaching from cattle, sheep, or hogs. An animal will frequently do more hurt in one of them in a day at this season, than in a week while the ground is well settled in summer. In the meantime the household plants, the children should not be neglected, and especially the elder ones, who have helped through the labors of the summer and harvests. Good schools must be provided for them, good teachers, and good books. Their minds now, and indeed at all times, should be as closely watched over, as the more tangible things of the farm. On their correct moral and intellectual education, depends much, perhaps all their success in after life, and no fences should be neglected, or bars left down in their young minds. Good seed sown here, on good soil, and well cultivated, if the weeds of vice and bad principles are thoroughly extirpated, will never fail of producing an abundant harvest. It is not sufficient that their parents see them furnished with all the means for mental improvement; they must take an interest in their studies also. Daily examination into the progress of their children, should be the constant practice of parents; questions asked having a bearing upon them; the connexion between their studies and their own business pointed out, to show that they have a practical application to the concerns of every-day life; and they should be explained and illustrated in such a manner as to excite an interest and inquiry in their young minds. The discipline of the school ought to be inquired into, and the relative standing of the children; and when praise is due bestow it; and where censure and even punishment are needed, they should not be withheld. No farmer would think of putting out his land to be managed by an agent, without frequent and close supervision. Do not, therefore, put out the minds of your children, which are of infinitely more value, to the management of every individual, without a closer and more thorough attention than he gives to his grounds and his cattle.

Commence spreading out hemp for dew rotting, bearing in mind the observations on this subject last month.

Kitchen Garden.—If not done last month, many of the early vegetables may be sown for the ensuing spring, if you have not hot-beds for forcing. The beds ought to be thrown up high, so as to avoid water during winter and spring, and being soon dry when the snow is off, the young plants will take an early start. They should be well filled with the more heating manure, as horse-dung, &c. In these, tomatoes, lettuce, spinach, cress, &c., may be sown. The asparagus bed should have a large supply of rich manure, which the winter rains will drain of all its enriching, soluble matters, and carry to the lowest roots, and on the opening of spring, will be ready to furnish a fresh treat for the table. Let the lettuces in frames still be exposed to the air during the day, but be covered by the glass at night. Practise the same treatment with cabbages and cauliflowers in frames. Take up all remaining roots, and store them as detailed last month. Rhubarb seed can now be sown, and will vegetate better than if kept out of the ground until spring. In the early part of this month, manure and trench the ground intended for early spring crops.

Fruit Garden and Orchard.—Gooseberries, currants, and raspberries, may now be transplanted. Of the latter, the red and white Antwerp are considered the most desirable. Do this the early part of the month, and in the latter part lay down the raspberries, and cover them with sedge or any kind of litter. Cover the strawberries with litter, or they may be killed, or at least injured by the winter. Dig and trench or plough the ground intended for planting in the spring.

Flower Garden and Pleasure Grounds.—The directions for last month will also apply to this, while the ground is free from frost. The latter part of the month cover the flower borders and bulbous beds, and also all flowery plants and shrubs with a litter of straw or of salt hay.

FOREIGN AGRICULTURAL NEWS.

By the steampacket Hibernia, we have our files of European journals to the 4th October.

Markets.—*Cotton*, as we anticipated in our last, has advanced ¼d. per lb., with large sales. The *Wheat* crop proves lighter on harvesting than it promised, so that importations from other countries to a moderate extent will be demanded. *Lard* is getting more and more into use in England, and manufactories for the purpose of making it into oil and stearine have started. In other things we see little worthy of note, few or no changes having taken place since our last advices. Business generally continues good and money plenty.

Stocks.—These continue to improve, and a greater firmness is manifested in them. Investments, however, will be slow and cautious.

Farmers' Magazine.—*Starch from Rice*.—This starch, for the manufacture of which a patent has been obtained, has many qualities that render it more desirable for use than the ordinary starch made from wheat. It is finer, whiter, and perfectly free from impurities; while the linen and other materials in which it is used "retain their stiffness, resist the influence of a humid atmosphere, and are not liable to mildew." Another advantage which the article made from rice possesses over that produced from wheat is, that less by one fourth is required for the purposes of the laundry.

The New Farmers' Journal.—*Improvement in the Cultivation of Hops*.—To the list of the various purposes for which iron is employed, will probably soon be added the cultivation of hops. The Rev. Mr. Formby, vicar of Finsbury, has the credit of suggesting the improvement, which consists in stretching a stout wire along each alley, to which wire the poles are fastened. The advantages of this plan are, that poles of much less value than those usually employed may be used; that the injury from gales of wind is avoided; and that the alleys, being open to the influences of the sun and air, the mould, that fatal disease of the hop, is thus prevented. At Halling, near Rochester, a garden of nine acres thus cultivated affords a pleasing sight.

Rags as Manure.—The value of rags has been proved by Mr. P. Howard, of Dowlish Wake, near Bath, who dressed a forty-acre piece of land partly with rags and partly with lime, and put it into wheat. The result of which is, that the part dressed with rags is far superior to the lime part, producing stalks six feet four inches high, with the ears proportionably long and large, the produce averaging forty bushels an acre. Two other small pieces on the same farm, dressed with rags after potatoes and vetches, are equally prosperous. The old laborers of the place declare they do not recollect ever seeing such pieces of wheat before.

Prolific Sow.—Mr. John Fox, of Haverigg, Millom, has a sow which, in five farrowings, has brought forth the most extraordinary number of one hundred and five pigs.

Grass Lawns and Lands.—We have frequently been asked about the best method of preparing and seeding lawns in England; the following from the London New Farmers' Journal gives as good directions as we have seen.

Whatever ground is intended to be laid down as grass, should be thoroughly trenched or deeply dug, and completely cleared of all discriminate plants; it should then be brought to the required level, and the larger stones and rubbish raked off; the edges of the beds, walks, &c., should then be carefully formed, and firmly trod and beat, and then the whole surface well rolled, that it may settle equally; and finally, the edges carefully cut with a sharp spade, it will then be ready for sowing, and the following will be found a suitable selection of grasses for the purpose:—

For one acre of light sandy soil.—Agrostis stolonifera, 1 peck; anthoxanthum odoratum, 2 do.; festuca tenuifolia, 1 do.; festuca duriuscula 2 do.; festuca ovina, 1 do.; poa pratensis, 1 do.; poa trivialis, 1 do.; Italian rye-grass, 1 do.; Dutchclover, 1 do.

For one acre of strong light loamy soil.—Alopecurus pratensis, 1 do.; anthroxanthum odoratum, 1½ do.; agrostis vulgaris, 1 do.; festuca duriuscula, 1½ do.; festuca ovina, 1½ do.; Cynosurus cristatur, 1 do.; holcus lanatus 1½ do.; poa trivialis, 1 do.; poa pratensis, 1 do.; Italian rye-grass, 1 do.; Dutch clover, 1 do.

This will not be more than sufficient for the quantity of ground specified, and it should be carefully and evenly sown, and well raked in and rolled, if the weather permit. When the grasses come up, the ground should be carefully gone over and cleared of all weeds and spurious grasses, as they appear; strict attention to this will do to insure the future excellence of the lawn. During the first season after sowing, the grass may be mown three or four times, but not in hot, dry weather, and afterward, the oftener it is rolled and mown the better.

Sussex Express.—*South-Down Sheep*.—The rise of the Glynde flock took place upward of sixty years ago. The late Mr. Ellman selected the best animals he could find from all the flocks of the county, which occupied many years. Next he classified them, and after half a century's close attention, he secured a permanency of character for his sheep, to which may be traced all the leading improvements which the South-Down sheep generally have undergone; for until the established blood of the Glynde flock was introduced into the county flocks, the South-Down sheep was a very imperfect animal, in its flesh and in its wool, both of which were radically changed through the instrumentality of this distinguished Sussex farmer. Mr. Ellman before he died, had the pleasure of knowing that not only had the Sussex flocks undergone the most valuable changes, but also that the South-Down sheep were acknowledged to be the best sheep in the kingdom, and were adapted for most districts, furnishing per acre a greater weight of meat than any other sort. The consequence of this acknowledgment was, the substitution in several counties of our own county sheep; and even at the present time this practice is extending itself into other districts, and with so much success, that we find, at the national shows, distant flock-masters defeating our own neighbors even with our own sheep.

The Gardeners' Chronicle.—*Great Division of Wheat by its Roots*.—The newspapers have lately contained an incomplete account of an interesting experiment on the propagation of wheat by division of its roots, from which it appears that a field may be cropped with wheat without employing more than the 2,400th of the usual quantity of seed-wheat. By the kindness of Mr. Archdale Palmer we are now enabled to state the exact facts, which are explained in the following letter from that gentleman:—

"As my friend Mr. Pownall has anticipated my intention to make the following experiment public, which I have no doubt has attracted your attention, I can not longer delay transmitting it to you for the benefit of the Gardeners' Chronicle, agreeably to my original view, as soon as I had ascertained the actual result, and that could not be before the wheat was thrashed, which has been done this week.

"1842:—July. One grain of wheat sown in a pot

—August. The same divided into 4 plants, which three weeks after were again separated and made 12 plants —September. The same 12 plants were again separated, and made 32 plants—November.—The same 32 plants were again separated into 48 plants, which were then planted in the open ground, not particularly prepared for them, 18 inches from each other, occupying a space of 11 yards by 1 yard, being the 440th part of an acre; consequently, 440 grains would be found sufficient for one acre, which I find weigh ¾ of an ounce.

"1843:—August. Ten of the 48 plants died, and the remaining 38 plants were cut down, unfortunately, before the wheat was ripe, as the birds had already taken one fourth away. 1,972 stems were counted. It was thrashed this week, and the weight is 2¼ lbs., which, according to the preceding calculation, consists of 22,000 grains. The wheat sown is known by the name of Eclipse. I have thus stated the simple facts; but there are many observations which will naturally arise in an inquiring mind, when it is known that the cultivators of the soil in this country do not reap, upon the average, above 30 bushels for 3 bushels sown. I am aware that a remark will be made of the trouble and some little expense for the garden-pots, which were 48s, if the experiment is carried on to a larger extent. But let every person interested in this account try themselves; they will, as well as myself, be astonished at the result."

It appears from this experiment, that by a new application of manual labor, *three quarters of an ounce* of seed-wheat will plant an acre of land. The quantity now used may be averaged at two bushels and a half, weighing about *a hundred and fifty pounds*. Sixty shillings a quarter will not be too high a price to take as the average value of seed-wheat, and therefore the saving in it will be about eighteen and sixpence per acre.

Of course the practical question is, whether this eighteen and sixpence will cover the cost of manual labor required for the operation of setting wheat instead of sowing it. If it does cover the expense, it would be an enormous gain to the country, because it would immediately afford a large amount of employment to those laborers, who not being able-bodied, are most in want of it. We doubt whether eighteen and sixpence an acre could be possibly expended in the operation, if judiciously conducted on a large scale; but that is a question which any intelligent farmer can answer better than we can.

We would only observe that if, as we are told, 3,800,000 acres are annually planted in wheat in England and Wales, the application of so large a sum as £3,500,000—which would be the amount of saving by Mr. Palmer's operation at the prices above assumed—to the relief of the poor, is something which demands a very different notice from that of a passing comment in a newspaper.

Ginger Wine.—Put 5 gallons of water to 16½ lbs. of lump-sugar, boil and skim it, then put in 5 oz. of ginger bruised (not ground), the peel of 3 lemons and 3 Seville oranges tied in a thin cloth; let it boil for half an hour, and put it into a vessel, and let it stand until just warm; then put in 1 spoonful of good yeast, and let it remain until next day slightly covered over. Wash out the barrel with some brandy; put into the wine the peel and juice of the oranges and lemons, and 2 lbs. of raisins cut open; stir it every day for a fortnight, and let the bung be put in lightly. Add 1 oz. of isinglass and 1 pint of brandy, and stop the barrel close. When done working, let the wine stand seven weeks before you bottle it.

New Phlox.—Another of those pretty varieties of Phlox suaveolens, with red introduced among the white flowers, has been raised by Mr. Van Houtte, and is, we understand, in the possession of the nurseryman under the name of *striata delicatissima*. Its flowers are delicately streaked all over with rose of different tints on a white ground.

Myatt's Strawberry.—Mr. Maund has lately tried the effects of Guano, and says, "it is quite evident that the luxuriant growth given by Guano to this shy-bearing strawberry, is highly advantageous to its fertility. Most persons agree in acknowledging Myatt's Pine strawberry to be the finest-flavored, and most difficult to cultivate successfully, of any in our gardens. We believe, however, that complaint against its fertility need no longer exist. If runners be planted as early as they can be obtained, certainly not later than July, and the beds be supplied with Guano-water, 4 oz. to the gallon, once a week, for four weeks, commencing as soon as the blossom-buds are visible in the hearts of the plants, we believe they will not fail to bear abundantly; and by maturing the latest flowers, will continue longer in bearing than many other sorts. Probably it would be advantageous to apply a little Guano to the plants in September; but if greatly stimulated at this season, the plants may possibly be driven into flower to the prejudice of the spring blossom."

TRANSACTIONS OF THE HIGHLAND AG. SOC. OF SCOTLAND.—*Experiment in Deep Plowing.*—The experiment was made upon a small field, which is sixty-five feet above the level of the sea. The soil is sandy, resting upon a sub-soil of sand and gravel of great depth, and so thoroughly drained by the declivity of the surrounding lands, that want of moisture is its natural defect. There is but little difference between the soil and the stratum on which it rests, beyond what culture and manure have made; but, from sinking of gravel, treading of horses, and pressure of the plow, year after year, and age after age, the sub-soil had become crusted, hard, and beaten as a road. In short, from shallow plowing, there was but little depth of cultivated earth, and, as on all such soils in dry seasons, the crop was scorched and scanty.

With a view to render this field fruitful in any season, it was sub-soiled with the Deanston plow, eighteen inches deep, and sown with wheat for crop 1837. The great vigor and luxuriance of the crop attracted general notice; and it must have yielded an extraordinary increase, if it had not been lodged by wind and rain shortly after the ear appeared. Therefore it gave only thirty-eight bushels of grain per acre, but three tons of straw, which proved its great strength. To this crop one of potatoes and two of wheat succeeded; but it is the culture of this field for crop 1841, and the result, which chiefly constitute this report.

It was all equally dressed with seaware; and four acres of the same quality and description were measured and staked off. Two of these acres were plowed twelve inches deep, with two horses, and two of them eighteen inches deep, with four horses. These two portions in all other respects were cultivated and managed exactly alike. They were planted with potatoes of the Don species, in the last week of April, eight inches deep, twelve inches asunder, and in drills thirty inches wide, running at right angles to the furrows of the experimental plowing. The potatoes were planted deeper than usual, therefore the shoots were longer in coming through the ground; but when they did appear, it was with great strength and regularity. They expanded their broad deep-green leaves, and grew vigorously, in the dry sandy soil, in a very severe and long-continued drought. It was soon evident that the deepest-plowed portion had the advantage; the stems and branches of its plants were stronger, and they first covered the ground.

The potatoes were lifted in the last week of October, when it was found that the land plowed twelve inches deep produced fifty-seven bolls per acre, and the land plowed eighteen inches deep produced sixty-nine bolls per acre, being a difference of twelve bolls per imperial acre, of four cwt. to the boll.

It is a condition annexed to the premium offered by the Highland and Agricultural Society for experiments in deep plowing, that one half of the land used "shall be cultivated in the ordinary way." By evidence before the Agricultural Committee in 1836, the depth of plowing in this county is from *six* to *nine* inches. If that depth had been taken for the lowest extreme in this experiment, the difference in the production of the two portions, it is believed, would have been greater; but as this field had been plowed twelve inches deep for years, its ordinary depth was adhered to, and the difference is certainly sufficient to establish the advantage of deep plowing.

As to the quality, it is excellent for the season from both portions of the land, and in that respect there is no difference. The potatoes from the deep tillage were larger, more of one size, had fewer small ones, and not so many of a green color as those from the other division.

The quantity on the deep tillage is eighty-seven bolls per Scots acre, which is a good crop for any year; and it will readily be granted that it is far above the average of the district this year, many fields not producing half a crop. A superiority so striking must therefore be ascribed to deep culture, being on both portions deeper than ordinary, which furnished moisture in a very dry and scorching season to a sandy soil, and raised its produce above that of richer lands. But though this is a great crop for the season, it must have been still greater if the field had been less exposed, as it has no shelter; and three days of very violent wind, in the first week of August, broke down the plants, which, from their great luxuriance were then very tender, and checked their growth.

The practical conclusions to be drawn from this experiment are—

First, That deep plowing increases the produce.

Next, That, as both portions of the land used in the experiment were opened up eighteen inches deep by the sub-soil plow for crop 1837, the full benefit of that operation is not obtained till the earth so loosened is again plowed up. And the reason is evident; for it is then only that the soil is deepened, by an addition from the sub-soil with which it is intermixed, and rendered more fruitful.

Lastly, If deep plowing increases the produce, it increases also the supply of vegetable manure; and a greater portion of manure, added to improved culture, must produce a progressive increase of fertility and of produce.

This experiment was begun on the glebe of Dunbar for the amusement of the reporter, and before he knew that any premium upon the subject was offered by the Highland and Agricultural Society.

To Destroy Red Spiders.—Persevere in syringing vines and plants infested by this insect, night and morning as this is an effectual means of destroying them.

Organizable Substance.—As a plant proceeds in its growth, it first forms its organs out of matter previously stored up within it, and then, having formed them, it proceeds to secrete a further supply of such matter for the next season's growth.

Editor's Table.

The Complete Cook.—Plain and Practical Directions for Cooking and Housekeeping; with upward of seven hundred Receipts: consisting of Directions for the Choice of Meat and Poultry; Preparations for Cooking, making of Broths and Soups; Boiling, Roasting, Baking, and Frying of Meats, Fish, &c.; Seasonings, Colorings, cooking Vegetables; preparing Salads, Clarifying; making of Pastry, Puddings, Gruels, Gravies, Garnishes, &c., and with general Directions for making Wines. With additions and alterations, by J. M. Sanderson, of the Franklin House. Lea & Blanchard, Philadelphia.—This is a republication of a standard English work, adapted by the experienced Mr. Sanderson to the American housewifery practice. Need we say more to recommend it to our readers? It is a handsome octavo of 196 pages, price 25 cents. How the publishers can afford such a work for so small a sum, we are really at a loss to divine. We recommend every husband to make a present of it to his wife, and every father to his daughter, for we are sure it would be twenty-five cents well laid out.

The Connecticut Farmers' Gazette.—No. 1 of Volume IV. of this periodical was issued on the 1st of October. It is nearly the size of our own periodical, 16 pages, semi-monthly, price one dollar a year, published in New Haven. We observe that Mr. Wood has retired from the editorial charge of the Gazette, and that it is hereafter to be conducted by its proprietor, William Storer. From the specimen he has given us in his first No., we think well of it, and have no doubt Mr. Storer will conduct it in such a manner, as to make it deserving a good circulation among the farmers of Connecticut.

The Magazine of Horticulture and Botany, by C. M. Hovey of Boston, Mass. Saxton & Miles, 205 Broadway, having been appointed Agents for this city, subscriptions will be received at their bookstore for the above periodical. It is the only magazine of the kind published in the United States; and is an indispensable work to the gardener, nurseryman, and amateur. In addition to his constant practical experience at home, Mr. Hovey is making frequent excursions to different parts of the country, for the purpose of keeping up with, and personally inspecting, the improvements that are going on in horticulture, &c., which keeps him at the top of his profession, and enables him with his other high qualifications, to conduct his magazine with great satisfaction to its numerous subscribers. We heartily recommend this work to the public.

Descriptive Catalogue for 1843–'44 of Fruit and Ornamental Trees, Shrubs, Vines, Plants, &c., cultivated and for sale at the ancient and celebrated Linnæan Botanic Garden and Nursery, Flushing, Long Island, near New York, with directions for their culture, &c., by Winter & Co. We have no recollection of having seen so full and complete a catalogue of the Garden and Nursery, as has been laid upon our table by the proprietors of the celebrated Linnæan establishment. It is a beautiful pamphlet of 92 pages, large octavo size, with an extra member of columns in it, describing minutely, not only fruits, their size, form, and taste, but ornamental trees and plants; classifying them according to height; color of the flower of herbaceous plants; together with extensive remarks and instructions for the cultivation of all; making the catalogue in fact an excellent horticultural work, no less valuable than safe as a reference on these important subjects. It will be sent gratis to all those who apply *postage free.*

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, OCTOBER 28, 1843.

ASHES, Pots,	per 100 lbs.	$4 50	to	$4 62
Pearls,	do.	5 25	"	5 38
BACON SIDES, Smoked,	per lb.	4½	"	5½
In pickle	do.	5	"	5½
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	23 00	"	24 50
BARLEY	per bush.	44	"	50
BEANS, White	do.	1 12½	"	1 25
BEEF, Mess	per bbl.	6 00	"	7 00
Prime	do.	4 00	"	5 00
Smoked	per lb.	7	"	7½
Rounds, in pickle	do.	4	"	5½
BEESWAX, Am. Yellow	do.	28	"	30
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	12	"	15
Shipping	do.	6	"	10
CANDLES, Mould, Tallow	do.	9	"	12
Sperm	do.	32	"	38
Stearic	do.	20	"	25
CHEESE	do.	4	"	7
CIDER BRANDY, Eastern	per gal.	35	"	40
Western	do.	28	"	35
CLOVER SEED	per lb.	7½	"	8½
COAL, Anthracite	2000 lbs.	4 50	"	5 50
Sidney and Pictou	per chal.	8 00	"	8 50
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	55	"	56
Southern	do.	52	"	54
COTTON	per lb.	6	"	11
COTTON BAGGING, Amer hemp	per yard.	16	"	18
American Flax	do.	15	"	16
FEATHERS	per lb.	28	"	34
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	8 75	"	9 00
clean	do.	— —	"	— —
FLOUR, Northern and Western	per bbl.	4 50	"	4 75
Fancy	do.	5 50	"	5 02½
Southern	per bbl.	4 25	"	4 75
Richmond City Mills	do.	5 75	"	6 00
Rye	do.	2 87	"	3 12
HAMS, Smoked	per lb.	5	"	7½
Pickled	do.	4	"	5
HAY	per 100 lbs.	38	"	42
HIDES, Dry Southern	per lb.	9	"	11
HEMP, Russia, clean	per ton.	185 00	"	190 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	6	"	8
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	8
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 75	"	3 00
Corn	per hhd.	12 50	"	13 00
MOLASSES, New Orleans	per gal.	24	"	26
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	25	"	28
Southern	do.	21	"	23
OIL Linseed, American	per gal.	75	"	80
Castor	do.	90	"	1 00
Lard	do.	55	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 12½	"	1 37
PLASTER OF PARIS	per ton.	2 00	"	2 25
Ground, in bbls	per cwt.	50	"	— —
PORK, Mess	per bbl.	10 00	"	11 00
Prime	do.	9 25	"	10 12
RICE	per 100 lbs.	2 75	"	3 12
ROSIN	per bbl.	65	"	1 00
RYE	per bush.	67	"	68
SALT	per sack	1 35	"	1 50
SHOULDERS, Smoked	per lb.	3	"	4½
Pickled	do.	3	"	4
SPIRITS TURPENTINE, Southern	per gal.	36	"	40
SUGAR, New Orleans	per lb.	6	"	7
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	7	"	7½
TAR	per bbl.	1 25	"	1 50
TIMOTHY SEED	per 7 bush.	13 00	"	14 00
TOBACCO	per lb.	3	"	6½
TURPENTINE	per bbl.	2 37	"	2 62
WHEAT, Western	per bush.	95	"	1 00
Southern	do.	85	"	95
WHISKEY, American	per gal.	23	"	25
WOOL, Saxony	per lb.	35	"	50
Merino	do.	30	"	35
Half-blood	do.	25	"	27
Common	do.	18	"	22

New York Cattle Market—October 30.

At market, 1,150 beef Cattle, (150 southern), 35 Cows and Calves, and 2,850 Sheep and Lambs.

PRICES.—*Beef Cattle* were very dull of sale, and a decline of full 50 cents per cwt. submitted to, and we quote ordinary to good cattle $4 *a* $4 50, with occasional sales at $5. 600 unsold.

Cows and Calves.—All taken at $18 *a* $25 to $28 50.

Sheep and Lambs.—Sales of 2,500 at $1 *a* $2 37½ for Lambs, and $1 25 *a* $4 for Sheep, as in quality.

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REMARKS.—*Ashes.* These are in fair demand, and considerable activity maintained in exports. *Cotton.* The news of an advance in England of ½d. per the Hibernia, had no effect on this market, the article having risen in anticipation some time before; but the injury by early frosts at the south, has had the effect of raising it to-day ½ cent per lb., at which advance large sales were made. Exports from the United States since 1st September last, 11,320 bales; same time last year, 37,593; same time year before, 37,759. It is now thought that the crop of this year can not more than two thirds equal that of the last. *Flour* has advanced a trifle since our last; it is doubtful, however, whether this can be maintained any length of time. A tolerably active business is doing in the article. *Grain.* Wheat is far from being plenty, and is taken at a small advance as fast as it arrives. *Corn*, *Rye*, and *Oats*, in good request. American *Hemp* is scarce, and is held at an advance. *Molasses* continues depressed; *Rice* and *Sugar* very firm. *Naval Stores* quick, at a small advance. *Plaster of Paris*, scarce and wanted. *Provisions*, on the whole very little change; if anything, they have a downward tendency, with the exception of *Lard*. The western farmer need not fear turning too much of his pork into lard this year; it will all sell at good prices. *Stearine*. There has been a sale of 2,500 lbs. of this article at 6½ cents. *Hogs*. A heavy contract of 500, of average quality, at 2½ cents per lb., has been made in Cincinnati; but this is not considered as establishing the price for the season. Our opinion is, that pork will rule as high as 3 cents for first quality, and our advice to the farmers is *not to take less*. *Tobacco*. The low-priced qualities are in good demand; others dull.

Stocks have advanced a trifle since our last.

Money. The banks are endeavoring to get the rate up to 6 per cent., but have not succeeded to any extent yet. As the increased amount of paper given on the business transactions of the season matures, we are of opinion the value of money will rise, and that it can not be had much longer for less than 6 to 7 per cent. A few new private banks have been recently started, and others are in contemplation.

TO CORRESPONDENTS.—John Lewis, A Learner, R. A. Avery, H. D. Grove, Wm. Partridge, and R. L. Allen, are received, and will find place in our next.

C. M. G., Your questions about sheep, wool, &c., are answered in back Nos. of our paper, which we have sent you.

G. S. Both yourself and M. B. are sent samples of Rambouillet wool in the manner desired. Our publishers have not received subscription spoken of, from G. S., either for last year or this. If sent, please state conveyance. The Bellevue Talevera wheat is not as good as Gen. Harmon's White Flint, for our climate, and it would cost four times as much. See Vol. I., page 344, of this paper.

W. C. A seedsman of this city has sent to Germany for Spurrey, and will supply you in March.

A Farmer. Your communication is a mere advertisement, and inadmissable except as such.

J. C. Your Herd-Book just received from England, is sent as directed.

The Prairie Farmer, and Dollar Farmer, will each please send a copy of their journal to R. L. Allen, Buffalo, and we will pay them by a bound volume of ours at the end of the year. Commence with all the Nos. of current Volume. The P. F. may omit its cover. One copy only of their paper need be sent to this office.

Will the writer of Taking the Census in Alabama, favor us with an article on Southern Farming? We will reciprocate the favor as he may please to designate.

BLACK GALLOWAY CATTLE.

A pure-bred imported cow, and a bull of the Galloway or Kyloe breed of Scotch Highland cattle, are for sale in this vicinity. These animals are very fine of their kind, and were chosen from one of the most celebrated breeders of this stock in Scotland. The cow took several prizes at the agricultural shows before being shipped to this country, and gives a superior quality of milk. The bull is quite equal to the cow, and they will be sold at a reasonable price.

Apply, post paid, to the Editor of this paper.

AYRSHIRE AND YORKSHIRE CATTLE.

Superior cows and great milkers, of the Ayrshire and Yorkshire stock, recently imported from Scotland and England, can be had on reasonable terms. They are in the vicinity of this city, and can be seen any time, upon a few hours' notice.

Apply, post paid, to the Editor of this paper.

FARMING LANDS FOR SALE.

For sale, about 500 acres of choice farming lands, lying on the Erie canal and Niagara river, 5 miles from Buffalo, and one mile below the Hydraulic Works in Black Rock. There is a due proportion of cleared and timber land, and the soil is equally adapted for grain, grass, and roots. Its proximity to an extensive and growing market, as well as the convenience, beauty, and healthfulness of the location, render this one of the most desirable situations in western New York. The most liberal credit will be given to purchasers.

Address, post paid, R. L. ALLEN, 156 Main st., Buffalo.

LINNÆAN BOTANIC GARDEN AND NURSERY—LATE PRINCE'S.

FLUSHING, L. I., NEAR NEW YORK.

The New Descriptive Catalogue, not only of Fruit, but also of Ornamental Trees, Shrubs, and Plants, cultivated and for sale at this ancient and celebrated Nursery (known as Prince's, and by the above title for nearly fifty years), with directions for their culture, may be had *gratis* on application to the new proprietors by mail, post paid. The collection at this establishment is unrivalled, and prices generally very much reduced: and the proprietors flatter themselves that the catalogue will be found to surpass in extent of information and usefulness, anything of the kind ever before presented to the public, and to be worthy of a permanent place in the library of the horticulturist. Orders will be promptly executed.

WINTER & Co., Proprietors.

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A. B. ALLEN.

205 Broadway, New York.

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Published Monthly, each number containing 32 pages, royal octavo.

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most
noble employment of Man.—*Washington.*

VOL. II. NEW YORK, NOVEMBER 15, 1843. NO. X.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

PACKING PROVISIONS FOR A FOREIGN MARKET.

The packing of Beef and Pork for a foreign market, is almost entirely a new business which has sprung up in our country within the year past. This is the result of the late modification of the British Tariff, which now admits our provisions at a more moderate duty than formerly, and enables the packers at the west to put up Beef, Pork, and Lard, to a large extent, in those districts where heretofore they were obliged to drive their animals at a very considerable expense, (not unfrequently a ruinous one,) a great distance to a market on the seaboard. By packing near where animals are bred, they can be grown to a larger size, and be made of a better quality; the provisions, also, can be delivered on board ship for exportation, either dried or pickled, at a cheaper rate than when the graziers are obliged to drive their beasts long distances to a market. It is a subject, therefore, of congratulation, that the fertile districts of the west can do their own packing, and thereby enhance at home the value of their abundant products.

Not only have the towns on the Ohio and Mississippi rivers gone extensively into this business, but those on the lakes also seem to be following rapidly in their wake; more especially in the article of Beef, of which we notice large quantities are now putting up, particularly at Cleveland and Chicago, expressly for the English market. At the latter place, it is said not to be uncommon to pack 500 to 700 barrels of Beef per day during the busy season. The prices for cattle range there from $1.50 to $2.00 per hundred; and were the animals of an improved breed, so that more mess pieces could be cut from their briskets, and larger and thicker rounds be taken from their quarters, we are told that the packers could afford to pay 25 to 30 per cent. more for cattle than they now do. Half a cent to three fourths per pound, makes a difference of from three to seven dollars per head for each beast, which is a matter of great importance to the stock-grower in the aggregate. Good bulls are very cheap at present, and by the use of these now, rapid improvements can be made at a small cost. We trust that all those, then, who have no other motive than their own immediate interest, will take the subject of improving their stock into serious consideration, and act with reference to it. They should begin at once, and pursue their objects with a steady, enlightened judgment, determined on continued improvement. No finer region exists for the production of Beef than that bordering the lakes. The prairie grass seems admirably adapted to this purpose, as is proved by the fine fat cattle raised in this country on that alone. What might we not expect, then, when a little attention has been paid to the improvement of the stock consuming it?

ORANGE COUNTY SHOW.

The annual show of the Orange County Agricultural Society, took place at the pleasant village of Goshen, on Wednesday the 4th of October. We arrived there for the purpose of witnessing it on Tuesday evening, and found the committees in session at their head-quarters, busy in arrangements for the next day. Wednesday came in somewhat blustering and cold for the season; but this did not seem to cool the ardor of the people at all, and early in the morning they began to pour into the quiet village on horseback, and in all sorts of vehicles, in considerable numbers.

The pens for the stock were arranged on the ample green in front of the churches, and were soon filled up with their destined inmates.

By 10 o'clock, about all that was to be shown had arrived on the ground, and the viewing committees entered upon their duties. There were a few good Durham bulls present, especially one belonging to Mr. John A. Smith, which demonstrated the superiority of this breed in his early maturity, easiness of keep, fine points, and good quality of flesh in an eminent degree. There was a pretty good number of excellent dairy cows present, especially those in full milk; the best of which, in our judgment, were the crosses of the Short-Horns. Of working cattle there were few, and horses the same. The show of South-Down, and Leicester sheep was quite respectable; of the Merinos we noticed not over a dozen, although there are many large flocks of fine wool sheep in this county. The pigs were in moderate numbers, some of which were quite choice. The Berkshire sow belonging to Mr. Hulse, and which took the first premium, was one of the finest animals we ever saw.

Among the agricultural implements present, we observed a stone-boat of a new construction; it having a trough-shaped top, suspended 18 inches or so above the usually-constructed bottom. Into this, stones were piled as fast as picked up, and when the boat came to the place where it was desired to unload, by touching a spring the top could be tipped up on either side, and the boat instantly discharged by slipping the stones to the ground.

The Courthouse was devoted to the show of grain, vegetables, fruits, flowers, the dairy products, and domestic manufactures. The butter, as a matter of course in old Orange, was very superior, and in numerous lots. Of cheese there is not much made in this county, and of course little was exhibited.

Taking the show in the aggregate, we did not find that full display of stock and some other things which we had expected to see; not that they do not exist in Orange county, but simply, we believe, because the people do not feel the importance yet of making a numerous and spirited show, or they have not that confidence or desire to bring out their animals and products which we think they should endeavor to attain. However, if the show was rather lacking in these things, it was not at all so in spectators. It was calculated that upward of 6,000 persons were present, which was a large number when we consider the population of the county, and that the weather was somewhat inauspicious most of the day, it being raw and threatening.

At 2 o'clock, a large auditory collected in the Courthouse, and were addressed by the President of the Society, Frederick J. Betts, Esq., of Newburg. His address was listened to with great interest, and we regret that want of space forbids our copying it entire. In one thing we liked it much; and that is, instead of dealing wholly in generals, it went into practical particulars, an extract or two of which we give, as an excellent example for those who may hereafter be called upon to address future assemblies of this kind. We shall look with interest for the result of his attempt with muck to destroy the toad-flax, and we can only add, that the details of one such experiment, no matter whether it fully succeeds or not, is worth all the generalities which we have listened to in agricultural addresses for the past ten years.

> I would beg leave to suggest that each member of our society should take upon himself to endeavor, in some respect, to improve the present system of cultivation, as to at least some one product of the soil, and that he be prepared, either verbally or in writing, to give the result of his operations to the society, at these, its annual meetings. With an ardent desire to perform my duties as your President, in a way to produce the greatest good to our Society, and to its members, and believing that public addresses to practical men must, to be effective, not only be *practical*, but must also be somewhat *circumstantial in their details*, I shall venture, even at the risk of tediousness, respectfully, but earnestly, to call your attention to some particulars which I deem important. And I would especially call the attention of every farmer whom I have the honor now to address, to the subject of the destruction of noxious weeds.
>
> The legislature has made it the especial busi-

ness of the Superintendent of Highways, (the road master,) to see that no noxious weed is allowed to grow within his peculiar dominion, the highway, and we can, and ought to compel him to perform his duty in this respect, if he neglects it; and the wholesome provision of the common law, "that every person must so use his own property, as not to injure that of his neighbor," should deter each of us from allowing any weed to mature its seed, so as to be wafted upon his neighbor's premises. Let each of us then attend diligently to his duty in this respect, and I doubt not that our good example will either encourage or shame our less diligent neighbor into the performance of his duty, and save us the necessity of a resort to even remonstrance on the subject.

As worthy of the especial attention of every farmer, I would particularly notice the weed commonly known among us as Toad-Flax; in its grasping, self-appropriating disposition, in the rapidity with which, by root and seed, it will overrun our land, and in the tenacity with which it clings to the slightest foothold it may obtain in the soil, it has, I believe, no successful rival in the great family of weeds—not even excepting that high dignitary among agricultural tormentors, the Canada thistle; with it we must do battle to the death—it will make with us no compromise—it claims all, and it will take all, wherever it obtains the mastery. To study its habits is, perhaps, the surest mode of ascertaining its cheapest and most ready destroyer. "Every bane has its antidote;" and a full measure of honor and reward is due him who shall discover the antidote for this. Careful cultivation, in a series of crops, which admit of the frequent use of the plow, the cultivator, and the hoe, will, it is said, not only destroy it, but convert it into an excellent manure; but it seems to choose for its abode high, broken, and stony land, and there this slow process must prove ineffectual. The fact, however, that it selects such ground as most congenial to its nature, and the further fact, that it is never, at least as far as my observation extends, seen in low, wet, or clay soils, suggests the idea that such soil, and especially muck, may be the remedy we want. I am now trying the experiment of its application, and trust that others will do so likewise.

At the close of the address, some spirited resolutions were passed, gentlemen pledging themselves to considerably augment the funds of the society another year, and thus enable it to extend its future usefulness; all of which we have no doubt will be carried into effect. The award of premiums was then read, and toward sunset most of the spectators returned to their respective homes, seemingly well pleased with the show, and determined to make it as much fuller and as much more spirited as possible another year.

On the whole, we were highly pleased with the excursion to Orange county and what we saw there, and, as hinted in our last number, at the close of the description of some of its butter dairies, it is our intention to give particulars of our visit hereafter. Situated as Orange county is, so near and so easy of access to this city, one of its *chief products* must, for a long course of years, be *milk;* the greatest attention, therefore, should be paid to their breed of cows in this particular. We think that the society ought to increase its premiums on these, and take such further measures for their improvement, as shall ensure this point in them being developed to its utmost extent.

FARM AND ROAD-HORSES.

There is nothing like that attention bestowed upon the breeding of good farm and road-horses that there should be; we mean the horse of *all work;* one that is reasonably showy, and possessing strength, endurance, and docility; with a walk of four miles an hour, and an easy trot to itself, over a good level road, of seven miles an hour. We have occasionally seen match horses, with which one could plow two acres easily in a day, and do any kind of farm-work in proportion; such as hauling out manure from the barn-yard, wood from the forest, going to mill, transporting produce, &c., &c.; at the same time they made a handsome appearance single in a buggy, or double in a carriage on the road; were equal to nine or ten miles in an hour, without much fretting, or fifty miles in a day; and were also easy and pleasant under the saddle. Such animals, however, are rare, yet they should not be; for with proper attention bestowed upon the breeding of horses, the farmers might generally as easily produce those we have described, as the miserable and ordinary animals which now pervade the country, and are scarcely worth the cost of rearing. The public is remarkably supine on this important subject, and we despair almost to attempt to rouse it to a proper sense of the advantage of breeding a good race of farm and road-horses.

For hardiness, strength, quickness on the road in walk or trot, and in endurance, the Canadian horse has few superiors; but he lacks show, and is not of sufficient size to suit the generality of our citizens. A few of the Vermont horses come as near to perfection as anything we have ever seen, for the road, saving that they usually want four or five inches more of height, and a proportionable size in other respects, to fit them for the heavy work of the farm, or making a sufficiently showy appearance in the carriage. At the west they have size enough; but reared on their rich, succulent pastures, and fed with corn without stint, they are leggy, lathy, soft, spongy, and without endurance. If they were fed with oats instead of corn, we have no doubt that the same blood would produce superior animals; for oats make good *muscle;* corn, fat loose flesh. Good, well-developed muscle (lean flesh) constitutes the main strength of any animal. South, and in the middle states, it is either the high-spirited racer on the one hand, or the slow, heavy-moving Dutch horse, on the other. To these there are some exceptions, the best of which are undoubtedly the Messenger, Mambrino, and Bellfounder stock of this vicinity, crossed upon roomy, well-bred country mares. Yet this blood, we regret to say, owing to the carelessness of our countrymen, and great indifference to breeding good roadsters, is nearly extinct; and what little there is left of it, is appreciated only by the few. We do not scruple to add, that a better farm and road-stock than is embraced in the above blood, never existed; and as a proof of it, seven eighths of the mongrel dunghills that are standing throughout the country, from one dollar up to five, are called "*Young*" Messengers, Mambrinos, Bellfounders, or Durocs. The pedigrees in their flaming handbills, let us inform the uninitiated, are a "caution" to all readers. The quizzical editor of the Spirit of the Times, once promised to give the public an epitome of them; we hope that he will soon make good his pledge. They usually begin in this manner:—

"Young Messenger, *sired* by *Old* Messenger, *him* by that famous, well-known horse, *Old* Eclipse, that beat Henry, that run a mile in ONE minute." They do not usually say who they are *damned** by; but if they have any doubts on this subject hereafter, they may add—by all admirers of good stock in general, and the American Agriculturist in particular.

Why it is that our farmers are so careless in the breeding of good horses, we can not divine; for a superior carriage-horse always commands a handsome price, and is of quick sale. We have looked over several hundred pairs of horses brought to this city for sale within the past six months, and there were scarce ten really prime ones 16 hands high among them. These brought from $700 to $800 the pair readily, and $600 is the very lowest price on an average that may be expected for them. The dealers usually calculate upon an advance of $200 for breaking, and risk and expense of marketing, which, considering the many mishaps which occur, is none too much. Estimating the average price, then, of good carriage-horses at $600 per pair, and deducting $200 for marketing, it leaves $400 to the farmer, which makes it a fair business, and well worth his bestowing more attention than he now does on the blood and rearing of this most serviceable animal to man. We wish the money that is annually thrown away upon race-horses, could be devoted to the breeding of good roadsters; how much better it would be for the country, we need not add.

STRAW FODDER.

In our October No. we took occasion to speak of the value for fodder of even so poor an article as buckwheat straw is generally considered. Oat, rye, and wheat straw, are much superior. In consequence of the early and unusually deep snows which have fallen this month and the past, the root crops have not been saved as well as usual, nor in as large quantities; and although hay is abundant, the farmers before spring, may find themselves shorter in their fodder than they anticipated. We recommend, therefore, that they husband all their straw carefully, as it is thrashed; and if there be any danger of a want of fodder, obtain cutting-machines, and have it cut up, then slightly moistened in the heap, and a small quantity of shorts, bran, oil or other meal, with a slight sprinkling of salt added to it. These additions make the stock relish the straw well, eat it with avidity, and thrive admirably upon it, especially if the animals are of a good breed.

Let it be recollected that the chief food of English stock throughout the winter, is straw with a few roots. The celebrated Bakewell kept a part of his animals in good heart on *straw alone* for several months every season; but his breed was superior, and to this circumstance a part of its merit must be attributed. Coarse, ill-bred animals are a loss under any circumstances, and the greater part of the food which is given them goes to waste; it matters little, therefore, whether it be grain, roots, hay, or straw; for all, or either of these articles will bring more in market than the growth or accumulation of flesh of the animals to which they are feed. We wish that some of our readers would make an experiment on the value of wheat, oat, and rye straw, in feeding this winter, and communicate the same to us. The straw should be evenly thrashed, and fed at the same time to three distinct lots of animals, as near alike as possible. The straw must be weighed, the animals also at the time of beginning to feed them, and again when the experiment is finished, so as to ascertain their exact gain or loss. The trouble of making such an experiment is trifling, and any one doing it and reporting to us, we will put on our free list for ten years.

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* For a humorous explanation of this term, see a quotation from John Randolph, page 171 of this paper, col. 2d, Sept. No.

We published a table on the comparative value of different kinds of fodder for cattle, in our first Volume, page 250. We know from repeated observation, that the value of straw varies greatly, according to the time that it is cut. If reaped when the grain is in the milk, it is more nutritious than when the berry becomes hard; but if allowed to stand till the grain easily shells from the head upon being shaken, and the stalks and leaves get rusty, it becomes nearly valueless as fodder. It has been proved that grain may be cut from three to ten days earlier than we have been accustomed to do it in this country, that it will give a better sample in consequence of this early cutting, and that the straw is of far superior quality.

HARTFORD COUNTY AGRICULTURAL SHOW.

The day after the New Haven Show being over, (September 29th,) was appointed for the great display at Hartford, Connecticut. Joined by a pleasant party of friends at this point, we took the morning train at an early hour, and were soon set down in this fine old town, and ancient seat of government of Connecticut. The weather could not have possibly been finer, and we found the city thronged with denizens from the country, all anxious for the Show. The ample rooms of the City Hall were devoted to the minor articles, and here we found a highly creditable display of fruits, flowers, vegetables, grain, flour, dairy products, and domestic manufactures. We should like to dwell upon the merits of these, particularly of some kinds of fruits and vegetables present, but we fear to fatigue our readers with repetitions of such things as we see elsewhere, and therefore forbear.

The stock-yard was in the environs of the town, near the river, and this was well filled with the usual breeds of domestic animals. There were a few very fine fat cattle present, and about 220 head of working oxen. Red predominated in their color. Some had nearly the fineness of points and clean sinewy limbs of the Devons; but usually, they were rather coarser and larger. Notwithstanding this, they seemed sufficiently quick in their movements, are said to be powerful in the yoke, and can not be excelled for their size as working oxen. We noticed a few good Durham bulls. Mr. Collins's Hero especially excels in his handling qualities; and from the points of his shoulders back, it would be difficult to beat him, take the United States over. The best milking cows on the ground we were informed were grade Durhams; but everything so soon gets mixed up with the generality of farmers, that it is impossible to give more than an indefinite guess as to the breeding of nine tenths of the stock of the country. We must confess ourselves great sticklers for pedigree among animals, or what is technically termed "*barn-yard aristocracy;*" and we do like to be able to answer, with some definiteness, the question of the shrewd Yankee boy:—

"Wal, now, Mister, can you tell us who that 'ere crittur's daddy is? If you can, and 'tis a *good* one, it's a trade, anyhow, and no more *slack.*"

Yes, the boy was right. To know "daddy and mammy" puts an end to "slack," and makes some certainty in the animal itself and its breeding; the public, therefore, must bear patiently with us if we fire away rather sharp now and then upon *barn-yard democracy.* We mean no treason against the Republic by this, and only want to revolutionize a little the domestic animals of the country. But to return to the Show.

There was a good display of native bulls, of a handsome, bright-red color, some of which were unusually fine, and deserving all the care and attention bestowed upon them. Only go on, gentlemen, we say, and improve these, and you shall find us your warm supporters. Of fine-woolled sheep there was a goodly number, principally an intermixure of the Saxons and Merinos. Pigs were rather a scarce article present. Poultry was in pretty full feather, and Mr. Kennedy's coops, especially those containing his noble gobblers, attracted marked attention. They were the representatives of a flock of about 80 at home, and appeared so superior, that we set them down as belonging to the "*aristocracy*" of poultry.

At 2 o'clock P. M., in company with the members of the Hartford County Society, and delegates from others in different counties, we sat down to a capital dinner at the United States Hotel. This was soon discussed, when all proceeded to the Center Church, to hear the anniversary address. This was preceded by a prayer by the Rev. Dr. Hawes, and the singing, by a choir of about 70 little girls, of a beautiful hymn, composed for the occasion by Mrs. Sigourney. Francis Gillette, Esq., of Bloomfield, then rose and made an excellent address, which was followed by the little girls singing the pretty song of—

O, the merry harvest-time!
The merry, matchless harvest-time!
What can vie, beneath the sky,
With the matchless harvest-time!

The Plowing Match now took place about a mile from town; but as the evening train was to leave about this hour, and as we were under the necessity of returning to the city that night, we could not stay to see it. We subsequently understood from one who was present, that eleven teams entered as competitors for the premiums. The task was the usual quantity of one eighth of an acre; the one that did his work best within an hour, to be considered the winner. The soil was a heavy loam, and the depth of furrow required, 7 inches. The width of the furrow was not prescribed, but run from 13 to 15 inches. This was heavy plowing, and most of the teams had two yoke of cattle in them. The average time was 32 minutes. The plowing was excellently well done. Mr. Zenas Rider took the first premium of $6; Mr. Erastus Morgan, the second of $4; and Mr. George Clarke, the third of $3. Thus ended the Agricultural Show for the beautiful and fertile county of Hartford. We had a delightful day of it there, and feel under obligations for the attentions showed us by the officers of the society, and others whom we met during our brief stay in the county.

DRAINING LANDS.

Much time and labor is annually wasted for want of properly understanding the best method of draining lands. Where there is surface-water merely, or pond-holes to drain off, draining is easily accomplished by merely running a ditch through the lowest part of the grounds, to a depth below the standing water. In ground that is springy, thorough draining is more complicated; but by proper observation, and a little experience, one may soon become so well acquainted with what is necessary to be done, as to feel under no embarrassment in ordinary cases.

The principal rule to observe in draining springy ground, is to seek the sources of these springs, and cut them off from the land to be drained, by digging the ditch deeper than the springs, near where they make their first appearance in it. For example, most of the land which it is desired to drain in this vicinity, is low swales or meadows, encircled by banks of table land, or hills of a greater or less height, from which the water oozes out and saturates the ground below. In most of the attempts which we have seen to drain this kind of land, a ditch is merely cut through the centre of the swale. This only serves to draw the water from the higher ground to it, without making the land any drier, except for a few feet on each side of the ditch. Now the true way is to cut a ditch at the foot of the banks or hills bounding the land to be drained, lower than the springs which ooze out of these elevations, and the water is immediately and effectually drawn off, and the ground which before was saturated like a wet sponge, becomes dry at once, and may then be put under cultivation.

The open weather of this and the following month is an excellent time for ditching, there being little to be done in our northern climate, save taking care of the stock, digging marl, or preparing composts for manures. We are glad to see, in our frequent excursions over the country, that much more attention is paid now to draining than formerly; but there are thousands of acres yet in the older-settled states, which claim the attention of the spade, and these lands, as we have before remarked, when divested of water, and put under cultivation, prove of the strongest and most valuable quality. They frequently abound with peat and rich vegetable matter, to a greater or less depth, and the excess of this can in all cases be used for fertilizing other portions of the farm.

MR. VAIL'S DURHAMS.

As some of Mr. Vail's stock was imported from the renowned herd of Mr. Bates of England, and as we had not seen it for nearly two years, at which time it had not attained sufficient age to be fully developed, we took a fancy, one of those clear sunny mornings in July, when the city is so hot, and the country looks so cool and inviting, to step on board the magnificent steamboat Empire, just as she was casting loose her fastenings, preparatory to a start on her daily trip to Troy. This is a distance from New York, by river, of about 160 miles; but that is nothing now-a-days, and in less than 10 hours we were safely landed at the foot of the classic Mount Ida, and in half an hour more Mr. Vail set us down among his stock on the farm.

The first animal that we looked at, was Wellington, as a matter of course; but how he had changed from the light 2-year-old form which we presented to our readers as his portrait, in the December No. of the first volume of this periodical. He was now (last July) 3 years and 9 months old, and had already nearly the full development of a mature, grown bull. Wellington is not large to look at, yet he is very heavy to weigh; then his horns, head, and limbs, are so fine; his points so well filled out, especially in rotundity of body, and depth and breadth of brisket, that it makes him a deceptive animal to the eye of any except a strict connoisseur. His handling is very good—his presence imposing—his action light, free, and easy. He was by Short Tail, (2,621,) out of the Oxford Cow, which obtained the first prize open to all England, at the Show of the Royal Agricultural Society in July, 1839. The Oxford Cow is a remarkable milker. In a letter received by Mr. Vail from Mr. Bates, dated Kirkleavington, September 18th, 1843, he thus speaks of her:—

The Oxford Premium Cow, calved October 5th, 1838, and was milked regularly every meal, twice a day, till October, 1841, (3 years,) and in September, 1841, would have weighed 100 stone, of 14 lbs. per stone, [1,400 lbs.] and this on grass only.

It was in August of this year that we saw her repeatedly on Mr. Bates' estate, and certainly she was the broadest and most massive cow we ever looked at, and in her points generally a very superior animal.

Duchess we thought had improved even more than Wellington. She is really extremely fine; especially in the head, horn, and neck, with beautiful eyes, and a brisket projecting something like Mr. Bates Duchess 34, as figured in April No. for current volume. Mr. Vail's Duchess is out of Nonsuch 2d, by the Duke of Northumberland, whose portrait is given in our May No. He is the best Short-Horn bull we saw in England, and has always taken the first prize when exhibited at the Royal Agricultural Society Show, as also at that of Yorkshire. In importing this stock, Mr. Vail aimed to combine deep-milking qualities, with good handling, symmetrical forms, and early maturity. How well he has succeeded, the public have only to call and judge for themselves.

Mr. Vail had two young bulls from Duchess, by Wellington, when we were at Troy, and by this time she has probably dropped a third calf. The first, Meteor, now 2 years old, was exhibited at the Show of the American Institute in this city last month, and took the first prize for bulls of any age—a silver cup. He was generally admired, and in appearance is much like his sire. The other bull is quite as promising as Meteor was at his age; but we can tell better how he will look when more fully developed.

We were shown several other fine animals when at Mr. Vail's, of which we made notes at the time; but these unluckily being mislaid, we can not speak more particularly as to their merits, further than to say, that we believe they are from deep-milking families. The produce of these cows, by Wellington, show a great improvement over their dams. Victoria, a 2-year-old heifer, is a remarkable animal; and one has only to look at her deep, wide brisket, fat rumps, and well-developed quarters, to be convinced of the great advantage of possessing a well-bred and well-chosen stock. In our judgment, Mr. Vail has not in all cases had that justice done to his animals which was their due; it, therefore, affords us the more pleasure to speak of them as we think they merit; and if others differ with us, we can only hope they will allow us the same freedom of opinion that we are at all times willing to accord to them.

A TRIP TO LOG HALL.

Owing to the hot weather coming on unusually early when recently in Mississippi, we made so short a stay in the state, as to deprive ourselves of the advantage of seeing many things in that country, which it would have given us great pleasure to do. Not the least among these was a visit we had planned to Dr. Philips of Log Hall. To make amends in a measure for our loss, we give some extracts from the Southwestern Farmer, detailing a trip which the editor recently took there. We trust one of these days that we shall be able to follow in his footsteps.

We found the Doctor busy in his barn-yard—for he is hardly ever away from home, dressed in very proper farmer-like habiliments—a home-made woollen roundabout, cottonade pants, buckskin shoes, &c. It is something unusual to see a *barn* in Mississippi: the one at Log Hall is a spacious structure, put up in an excellent style of workmanship. In this barn and the surrounding sheds, are vast stores of hay, fodder, oats, straw, and other provender; and in one of the apartments a patent cutting-machine, turned by crank, in which everything is cut up—hay, oat-straw, fodder—all is cut up—racks are not used at all; but a wide trough is in every stall, as well as under sheds in the yard, where cattle and other stock find the food cut up and brought down to a level with their respective capacities.

The *hog-pen* showed the same provident care. A furnace and a capacious kettle were there, to cook food for the fattening hogs; and a series of troughs, for alternately cooling and feeding with. All the different pens and lots about the barn-yard opened into it by means of small gates, substantially and neatly made.

The *piggery* was a sight entirely new to us; a "long-drawn aisle" extended from end to end of this establishment, along the middle; and on either side of this aisle were suits of rooms for the different madams and their young families of porkers, the troughs being on the side next the aisle, so that each apartment could be fed from the centre. The entrance to each apartment or pen, was by a gate opening on the outside.

The *implements* at Log Hall embrace a great number and variety of choice articles. Under one shed we saw twenty-seven plows and cultivators, most of which were of peculiar beauty and value. Among the implements we saw also a cob-crusher, a corn-sheller, a thrashing-machine, &c., &c.

The *buildings*, also, are worthy of the man. The house itself, which is not yet completed, is admirably arranged for comfort and convenience; is well ventilated, and planned and constructed in good taste. The gin-house, and, indeed, nearly all the structures about the place, have been evidently put up with a view to permanent utility, rather than for cheapness—no make-shift expedients, but abiding conveniences.

The land is of good quality, rather richer than the average of lands in Hinds, and lies very handsomely, sloping down to the Chittoo-Loosa (Big Black) river. On the upland part, we examined the experiment which the Doctor has been making with manuring cotton. The difference is not only manifest, but really astonishing. Manured cotton and unmanured cotton were growing side by side, and the difference was about the same as that between the cotton on the Mississippi bottoms, and that on ordinary thin uplands.

Seeing a pile of manuscript books on the Doctor's desk, on our return to the house, we must needs pry into them. Here was a "*Stock Book*," giving the history and pedigree of each animal on the place, with the date of all the operations in that department, it being, to the barn-yard and piggery, a minute "Family Record of births, marriages, and deaths." Then there was the "*Farm Book*," a kind of daily journal of all the work done. In another book was a list of all the field hands, and opposite to every day (except Sunday) a statement of the pick of each hand—and that running back for many years. The hands are a happy looking set, showing, by their fat and cheerful appearance, that they know what good living and plenty of it means.

After all this, we need hardly say that Dr. P. is a man of untiring energy. Happily, he has a help meet who is herself "magna pars," in regard to the order, the neatness, the good taste, and the general economy that prevail. A great part of the time at the hall is devoted to literary pastime; for, where system is adopted, labor does not encroach upon the hours for recreation, nor recreation upon those of labor. Each duty has its appropriate season; and at that season the duty is done. Hence, notwithstanding his excessive labors, (for he employs no overseer,) notwithstanding the great attention he gives to reading and to his domestic enjoyments, yet still he manages to find time to write more, we venture to say, than any farmer in the state.

Water-Rotting Hemp.—In our first volume, page 209, we spoke of the intention of Mr. Savage of Kentucky, to try the experiment of water-rotting hemp in a flat-boat moored in the Ohio river, by boring holes in the bottom and sinking it nearly to a level with the top of the boat. We see in the Kentucky Commonwealth, that Mr. Sandford Connelly of Union county, has succeeded well in rotting hemp by adopting this system, and he recommends it to others. He found that hemp water-rotted in the spring, after lying in stack all winter, made a stronger and handsomer sample than that rotted in the fall.

IMPROVEMENT OF DOMESTIC STOCK.

As the Cultivator continues knowingly to misrepresent our differences of opinion upon this subject, we here restate them in a single sentence for the last time, referring the reader to the full quotations which we have given in several of our late Nos., to substantiate us in every word we utter.

The Cultivator asserts, that animals possessing 20 good points, can be improved by crossing them with others possessing only 5. This we deny in toto; and say that by taking such a cross, one must expect to get the *bad* with the *good*, and not calculate as a general rule, that the produce would possess over 10 or 12 good points, and more probably not exceed 8 or 9; and we can appeal confidently to every experienced breeder to substantiate this opinion. We made no reference whatever to the Cultivator's remarks about crossing upward with superior bulls, for all this was but the echo of what any school-boy might have written, and what has been repeated a thousand times in articles already published on stock breeding. *That*, the Cultivator had learned from its horn-book; but the "*five points*" improving principle was *original;* and as this recommendation, if followed up, would infallibly *destroy* every well-bred animal in the country in a *single generation*, and with them millions of dollars invested in fine stock, and the painful labors of years, we determined to speak out at once strongly and boldly. What we said was felt in the right quarter, and we had predetermined it should be. We will venture to add that the country will not be pestered with any more such mischievous nonsense very soon, and that the attempted improvements by every conceited jackanapes, who happens to have jumbled two ideas together on this subject, will now pause for a while. As far as we can learn, there has not been a single dissenting voice to our opinion, and not one that has not condemned the course recommended by the Cultivator. We must confess that we do not feel under any particular obligations for the advice tendered us by a few of what we think over good-natured friends. Little matters we invariably let go, for we doubtless err often enough in these ourselves, and are therefore willing to be both lenient and charitable to others;

but if the public ever catches us attempting to lead the country astray in a thing of so much importance as recommended above, they are welcome to lay on as much as they please—they shall never hear us complain or beg for sympathy.

PERIOD OF GESTATION OF DOMESTIC ANIMALS.

It is very important to farmers to know the length of time that different animals go with young. We accordingly give the period of those which most concern him as near as we can ascertain it.

Mare	11	months.
Jennet	11	"
Cow	9	"
Goat	4½	"
Ewe	5	"
Sow	4	"
Bitch	2	"
Cat	8	weeks.
Rabbit	4½	"
Rat	5 to 6	"
Mouse	4 " 5	"
Guinea Pig	3	"

Period of Incubation of Domestic Fowls.

Swan	6	weeks.
Turkey	4	"
Goose	4	"
Duck	4	"
Pea-Hen	4	"
Guinea-Hen	3	"
Common Hen	3	"
Pigeon	2	"

GOOD EFFECTS OF PLASTER NEAR SALT WATER.

It is generally contended by writers, that lands within 30 miles of the sea, or any large body of salt water, are not benefited by the use of plaster; and taking these assertions for our authority, we so believed till we made a visit to the farm of Mr. William K. Townsend of New Haven, lying directly on the Sound, and gradually sloping to it, and of course under the direct influence of sea breezes and sea exhalations. Mr. Townsend sows at the rate of from one to three bushels of plaster per acre on his grass-land, and the effects are nearly if not quite as apparent as any we have witnessed in the interior of the country. Several experiments have been made here by sowing a breadth of land, and then skip a breadth, and so continuing till the whole field was gone over. At the time of cutting the hay on those breadths where the plaster was sown, the grass was not only thicker and taller, but finer, and apparently of a sweeter and better quality. The after-math or rowen showed the same difference in an eminent degree.

A practical result of this kind shows that the theory of saline vapors combining with the plaster, and making it inoperative is at fault; and chemists must now seek some other cause than this, to convince us that lands close to the vicinity of salt water are not benefited by the use of plaster. Such land as lies so near the sea as to be continually saturated by the spray of the surf beating upon the shore, may not be benefited by the use of plaster; for by the excess of salt, they become almost entirely barren; but those a little removed from the ocean, it is proved by the experiment of Mr. Townsend, can be improved by the application of it. We hope others may be induced to try experiments of the use of plaster, especially by sowing it in the fall, and early in the spring, followed by a wet as well as a dry summer. Plaster requires about 500 parts of water to dissolve it; a wet season following the sowing of it, would therefore be the fairest test of its efficacy.

THIRD VOLUME OF THE AMERICAN AGRICULTURIST.

Two more numbers, which will be issued on the 1st and 15th of next month, will complete the Second Volume of this paper; and on the 1st of January, we shall commence Volume Third. For this, we have many things in store, of which we shall speak hereafter. The present handsome and convenient form, high, national character, and cheap price of the American Agriculturist, will continue to be maintained. It has received the sanction of the public in an eminent degree; and its *steady, increasing* circulation, is an ample guarantee of the future. During October, we had an addition of upward of 300 to our subscription list, nearly every one of which ordered the work from the commencement of the first volume. November, so far, is equally promising, and in addition to this, our average sales the past season have been over 100 bound copies of Volume I. per month. We will venture to say, that this, when it is considered we are so near the close of our volume, is unexampled in agricultural periodical literature; and we have no doubt that the list of subscribers to Volume Third will be the largest of any in the Union. The American Agriculturist took its stand from the first, as unrivalled in point of practical knowledge and general ability; and as it begun, so it has kept on, with the added knowledge and improvements of the day, and thus will it continue to the end of its career, which, if our life and health be spared by a kind Providence, we intend shall be a long one. We hope that those who have so generously sustained us so far, will continue their kind offices, and that others whose eye may meet this paragraph, will not remain behind them in the good cause of disseminating a work so well calculated as this to promote an improved and enlightened system of Agriculture.

Review of Leibig.—We finish Dr. Mohl's searching Review of Leibig in the present number. We recommend the concluding paragraphs especially to the attention of our readers; for while the last accords to this distinguished chemist, seemingly, all that he can justly claim, the preceding one exposes his apparently hasty conclusions and mistakes with no little severity. We shall look for Leibig's reply to this with no little interest, and shall be glad if he can show substantial reasons for all his bold assertions.

Salt and Lime for Stock.—We see that the American Farmer recommends equal parts of salt and lime mixed to give to stock. We always supposed lime injurious to animals taken internally, and on this account, have often heard objections to using salt for stock made from one of the springs at Syracuse. Will the Farmer please inform us why lime is thus used, and what are its benefits?

Postage.—We trust that every freeman in these States will use his influence with the representatives and senators of Congress, to have the exorbitant rates of postage cut down, and the franking privilege *entirely abolished.* We are informed upon good authority, that seven eighths of the weight of the mails now are franked; thus a practical aristocratic feature is introduced into our republican system, *taxing the many for the benefit of the few.* If government or any of its officers wish a letter or pamphlet carried by mail, we say, *let them pay* for it the same as any private individual. We think that the charges for carrying letters, newspapers, pamphlets, and all mailable matter, should be regulated by the ounce; and we see no reason to alter our proposition of rates from those heretofore expressed in this paper, unless upon trial it should be found that they could be carried cheaper, viz:—

5 cents per ounce for all letters 100 miles and under.
10 cents " " over 100 miles and under 500.
15 cents " " over 500 miles.

For the purpose of encouraging the diffusion of knowledge among the people, papers and pamphlets should not be charged above half a cent per ounce, the United States over. We are confident that under such a system, a greater revenue would accrue to the Post Office than at present. Every one now feels that the rates of postage are an odious and unjust tax, and they conspire to evade it in all possible ways.

LIST OF PREMIUMS

Awarded at the 16th Annual Show of the American Institute, October, 1843.

Agricultural and Horticultural Department.

Horses.

Stallions.—Hezekiah Wetmore, West Chester co., N. Y., best stallion—silver cup. Henry Vanderwater, New York, for 2d do.—diploma.

Brood Mares.—Robert L. Stevens, Hoboken, N. J., best brood mare, Polly Hopkins—silver cup. John H. Coster, New York, brood mare, Gulnare—silver medal. Henry Watson, East Windsor, Ct., brood mare, Betsy Wilson—diploma: a silver cup having been before awarded. John A. Pool, New Brunswick, N. J., brood mare Indiana—diploma: a silver cup having been before awarded. C. M. Hall, Harlem, N. Y., young brood mare, Young Lady Light-Foot—diploma. Alexander Benedict, Staten Island, N. Y., gray mare—diploma.

Colts.—Robert L. Stevens, Hoboken, N. J., best colt—silver cup.

Jacks.

John A. Pool, New Brunswick, N. J., best jack—diploma: a silver cup awarded last year.

Mules.

Robert L. Stevens, Hoboken, N. J., best pair of mules—silver cup.

Improved Breeds of Cattle.

Bulls, 2 years old and upward.—George Vail, Troy, N. Y., best Durham bull, Meteor—silver cup. Henry Hull, best Devon bull—silver cup.

Bulls, 1 *year old.*—George M. Woolsey, Hurlgate Neck, N. Y., best Durham bull, Jupiter—silver cup.

Bull Calves.—Wm. Gibbons, Madison, N. J., best Durham bull calf—silver medal.

Cows.—Thomas Addis Emmet, Mt. Vernon, N. Y., best Durham Cow, Celeste—silver cup.

Heifers.—Wm. Pirnie, Harrisontown, N. J., best Durham heifer, Victoria—silver cup.

Heifer Calves.—Wm. Gibbons, Madison, N. J., best Durham heifer calf—silver medal.

Native Stock.

Cows.—John R. Peters, New York, best native cow—silver cup.

Heifers.—Joseph Clowes, Harsimus, N. J., best native heifer—silver medal.

Bull Calves.—Bethuel Brackett, New Haven, Ct., best native bull calf—silver medal.

Working Oxen.—Benajah Ives, Cheshire, Ct., best pair of working oxen—silver cup. Lambert Wyckoff, Bushwick, L. I., 2d best pair of working oxen—silver medal.

Special Awards.

Bulls.—Wm. Gibbons, Madison, N. J., Durham bull, Zero—silver cup. John A. Pool, New Brunswick, N. J., Durham bull, Carter—silver cup.

Cows.—Henry Whitney, New Haven, Ct., Durham heifer, Cornelia—silver cup. Henry Smith, Astoria, L. I., a cow of great milking qualities—silver cup.

Sheep.

Long Wools.—George Monteith, Albany, N. Y., best buck, Cotswold breed—silver cup. Charles Blackbourne, Bedford, L. I., best ewe, Lincolnshire breed—silver cup. Charles Blackbourne, Bedford, L. I., best lamb—silver medal.

Middle Wools.—Obadiah Elliot, Middleham, N. J., best buck, Southdown breed—silver cup. Francis M.

Rotch, Butternutts, N. Y., best ewe, Southdown breed—silver cup. Francis M. Rotch, Butternutts, N. Y., best lamb, Southdown breed—silver medal.

Fat Wethers.—J. Macdonald McIntyre, Albany, N. Y., best fat wether, Southdown and Cotswold breeds—silver cup.

Special Awards.

William Pirnie, Harrisontown, N. Y., for a ewe and lamb, Leicester breed—diploma.

James Broidie, West Chester co., N. Y., for a ewe and two lambs, Leicester breed—diploma.

J. Macdonald McIntyre, Albany, N. Y., for a Southdown buck—diploma.

John Beatty, Morris co., N. J., for six ewes of the Bakewell breed—diploma.

Charles Blackbourne, Bedford, L. I., for a Lincolnshire buck—diploma.

George Monteith, Albany, N. Y., for Leicester bucks—diploma.

Swine.

William P. Moss, New York, for the best Berkshire boar—silver cup.

Alexander Benedict, Staten Island, for the 2d best boar—diploma.

John Giles, Providence, R. I., for the best Berkshire sow—silver cup.

John Rutter, Yorkville, N. Y., for the 2d best sow—diploma.

Turkeys, Geese, Ducks, and Fowls.

W. J. Townsend, Newtown, L. I., for the best pair of turkeys—American Poultry Book.

William Ross, Ravenswood, L. I., for the best pair of Bremen geese—American Poultry Book.

Henry A. Field, New York, for the best pair of mongrel geese—American Poultry Book.

W. J. Townsend, Newtown, L. I., for the best pair of Muscovy ducks—American Poultry Book.

Mr. Orphan, New York, for the best pair of common ducks—American Poultry Book.

H. T. Chapman, New York, for the best pair of imported Dorking fowls—American Poultry Book.

Wm. Ross, Ravenswood, L. I., for the best pair of Poland fowls—American Poultry Book.

Thomas Bartine, Astoria, L. I., for the best pair of capons—American Poultry Book.

J. W. Goodwin, Fort Hamilton, L. I., for the best lot of Egyptian fowls—American Poultry Book.

S. A. Halsey, Astoria, L. I., for a pair of Chinese fowls—American Poultry Book.

George C. De Kay, New York, for a bird (the Curaçoa)—American Poultry Book.

Joseph Foulke, Hell Gate, N. Y., for a bird (the Flamingo)—American Poultry Book.

Products of the Dairy.

J. H. Smith, Montgomery co., N. Y., for the best butter—silver cup.

Miss Francis C. Johnson, Goshen, N. Y., for a good specimen of butter—silver medal.

Edwin Smith, for the best old cheese—silver cup.

Case & Freeman, 101 Front st., New York, for the best new cheese—silver medal.

M. Davenport, 3 Front st., New York, for the best pine-apple cheese—silver medal.

Special Awards.

E. P. Whiting, Goshen, N. Y., for a good specimen of old cheese—diploma.

N. Coe, Winchester, Ct., for a good specimen of old cheese—diploma.

Roswell Plummer, for a good specimen of new cheese—diploma.

Stephen Yates, Palatine, N. Y., for a good specimen of new cheese—diploma.

Charles A. Jackson, 29 Front st., N. Y., for a good specimen of pine-apple cheese—diploma.

Milk.

T. Selleck, Chester, Orange co., N. Y., for the best milk (test 115°)—silver medal.

Mathew Hanna, Oxford, Orange co., N. Y., for the 2d best milk (test 107°)—diploma.

Agricultural Implements and Machinery.

Cornelius Bergen, Brooklyn, L. I., for the best plow, self-sharpening—silver cup.

E. G. Whiting, Trenton, N. J., for the 2d best plow, Wiskonsin—silver medal.

J. S. Eastman, Baltimore, Md., for the 3d best plow—diploma.

Cornelius Van Winkle, Paterson, N. J., for the best plowing, done with Eastman's plow—silver cup.

William Close, Paterson, N. J., for the 2d best plowing, done with Bergen's plow—silver medal.

John Swanville, Plainfield, N. J., for the 3d best plowing—diploma.

Curtis Thorp, Binghampton, Broome co., N. Y., for a corn-hiller—diploma.

Curtis Thorp, Binghampton, Broome co., N. Y., for a three-share plow—diploma.

Thomas Wiard, Avon, Livingston co., N. Y., for a four-share plow of great merit—gold medal.

Jonathan Conroy, 221 Houston st., N. Y., for Walters's adjusting plow-stock—diploma.

T. & J. C. Porter, and Chauncey Hart, Farmington, Conn., for the best ox-yoke—diploma.

J. S. & J. P. Newton, Woodbridge, N. J., for an ox-yoke—diploma.

Edward Townley, 75 Thompson st., for the best bee-hives—diploma: a silver medal having been before awarded.

Brown & Nostrand, West Farms, N. Y., for excellent bee-hives—diploma.

Archibald C. Ketchum, Schenectady, N. Y., for a potato-digger—diploma.

J. C. Langdon, Troy, N. Y., for cultivator plows and drag-rake—diploma.

William Wallace, 414 Fourth st., N. Y., for a thrashing-machine—diploma.

Thomas P. Thorne, Fishkill landing, N. Y., for a straw-cutter—silver medal.

William Hovey, Worcester, Mass., for a hay-cutter—diploma.

George Smithson, 229 West st., N. Y., for a straw-cutter—diploma.

Todd & Marshall, Stamford, Conn., for a straw-cutter—diploma.

Henry Warren, Troy, N. Y., for a root-cutter—diploma.

C. Conklin, Peekskill, N. Y., for a feed-cutter—diploma.

John Moore, 31 Fulton st., N. Y., for an exhibition of agricultural implements—diploma.

B. M. Freeborn, 183 Front st., N. Y., for an exhibition of agricultural implements—diploma.

John Mayher & Co., 195 Front st., N. Y., for an exhibition of agricultural implements—diploma.

Jordan L. Mott, 264 Water st., N. Y., for the best agricultural boiler—diploma: silver medal having been before awarded.

[The premiums on Fruit, Flowers, Vegetables, and Agricultural productions, in our next.]

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

IS CHESS THE ORIGINAL OF WHEAT?

Buffalo, November 2, 1843.

No. VIII., p. 240, of the American Agriculturist contains a letter dated Virginia, August 10, and signed P., which, from some internal evidence, indicates an origin from one able and enlightened, and now filling a responsible post in the great cause of American agriculture; and though it may be our lot, for the time being, to differ on some points in this important and comprehensive pursuit, yet it may be fairly assumed that we agree in wishing to arrive at *truth*, wherever that may lie. He will excuse me for adding it would have been more *pleasant* and satisfactory to the public, had he added his name to the communication. But allow me in the first place, to correct a preliminary mistake he has fallen into, in attributing the authorship of "Ulmus" to me, the credit of which, whatever it may be, being due to Mr. L. F. Allen, and not to me, who entered the agricultural field some years subsequent to the publications alluded to.

It is a source of no little regret, to find so worthy a correspondent as P. falling into some of the common errors of a controversialist, under which genus it is the least of my ambition to be classed. It partakes rather too much of the Swift and Warburton school, to be in decidedly good taste. I "undertake to make suggestions, which should not have been expected from an enlightened man in this enlightened day;" and I am "Rip Van Winkle sleeping through the chess controversy," which resulted in the "*triumphant*" (?) overthrow of this "deeply-rooted and popular error;" and if I had not thus slept I "would have scarcely ventured to evoke the aid of metamorphosis, long since exploded and banished to the dim twilight of agricultural knowledge, nor remained ignorant of the utter discomfiture of those who then thought as I do now."

With all deference to the responsible station and well-known ability of P., I must beg leave to say, that I see no relevancy to the subject in these and kindred remarks. It is talking about it, and about it, but not to the matter in issue. I made a *suggestion* it is true, (not "*suggestions*,") that chess is the original of wheat, but I do not attempt to substantiate it, for nothing would satisfy even myself of its correctness, short of absolute demonstration, which can only be afforded by actual experiment, for which, years may be required. But P. neither overthrows this single suggestion, nor even renders it less probable than it was before.

But to the main subject of his article. I regret he should have confined himself to asserting simply the discomfiture of one of the parties belligerent, without condescending to inform us ignoramuses in what particular way, and on what grounds we have been overthrown. I must assert again my ignorance of the chess controversy, nay more, my utter repugnance to wade through pages and folios for ideas, which, after all, may exist rather in the imagination of the writers and their too credulous readers, than in the volumes supposed to be enriched by them. I should as soon think of looking over the tomes of monkish superstition, containing the evidence on which Galileo was confuted, in his novel and heretical ideas that the world turned on its axis. But this I will stipulate with P. to do: I will carefully read, and weigh every idea going to show the inconvertibility of wheat into chess, if collected and *condensed* by P. into a tangible, comprehensive, and readable form. But he must be sure *they are ideas* going directly to establish his position, not round-about and irrelevant assertions that prove nothing to the purpose. As it is my only desire to arrive at the truth of this matter in the shortest possible way, without at all permitting myself to be awed or hampered by commanding names or authority, when "a greater than Solomon" is at hand to settle the principle, I mean *nature herself*, I shall confine what I have to say on this subject to the statement of a few simple facts.

A neighbor of mine had a field of fine wheat apparently entirely free from chess, except by the side of one of the fences, which was nearly all chess. On inquiry how this difference occurred, he said the *whole field had been sown with the same seed precisely, but that his flock of geese had got into the field while the plants were young, and had eaten off and partially pulled up the wheat, and the consequence was it had turned into chess.* So much for fact No. 1.

Fact No. 2. A friend in Ohio had a large wheat field, through the middle of which, a low swale of marshy, wet land extended. Over all this low ground, chess, was, with some slight exception, the only crop, while all besides was fine, plump wheat. His explanation of this result was, that *all the field was sown with the same seed, broadcast, without discrimination, and that owing to the low part of the field being saturated with water when the frost set in, the ground had been thrown up, the roots of the wheat laid bare, and the scanty nutriment they had been able to get, had produced chess in the place of wheat.*

Fact No. 3. I saw a luxuriant field of oats at Manitouwoc, Wisconsin, this season, which had been cleared last fall, and was then surrounded with the original forest, over which no cultivated crops had ever before been sown. The whole field looked remarkably fine, as did all the crops in that region, and I discovered no chess in any part of the field except on one edge. This had been scratched over with the harrow for about two feet in width, and the ground was very hard, while all the remainder of the lot had been well plowed. *On this strip, affording a scanty subsistence to the seed, every particle of the grain was chess. The owner assured me the seed was alike over the whole field.*

Fact No. 4. Mr. Wright, Editor of the Prairie Farmer, told me while in Chicago in July last, he had the testimony of persons of unquestionable veracity, that *they had discovered stalks both of wheat and chess growing out of the same stool, and originating from the same seed, the most careful washing and examination failing to show two separate roots.*

• Fact No. 5. Mr. Wright farther assured me, he had equally conclusive evidence that *from the same stalk, producing a head of wheat, a shoot had been thrown out from a lower joint, which produced chess.*

Now here is testimony in favor of wheat and oats producing chess, which, if given on a capital trial before the late Chief Justice Marshall, and not satisfactorily explained, would inevitably have resulted in hanging the criminal. On these simple facts I rest the case. Will P. enlighten and oblige your readers by affording some perfectly satisfactory explanation of the above facts, or acknowledge there is sufficient evidence that wheat and oats can be converted into chess?

In a recent tour of some 2,500 miles through Ohio, Michigan, Indiana, Illinois, and Wisconsin, I met but one person with whom I conversed on the subject who entertained a settled conviction that wheat can not be converted into chess, and he was from the east; and from the evidence on which they base their opinion, I think I may add with all possible deference, their brains must have produced cheat or chess, not to have come to this conclusion. I beg it will be particularly remembered, to avoid the waste of ink and paper, that while I contend that wheat may produce chess, chess is also produced by sowing chess.

R. L. Allen.

We recommend the perusal of the following able letter to our southern readers. Let them recollect that the writer is Virginia *born and bred*, and has now resided some years in the west. His remarks upon the advantages of farming on the Atlantic borders, are particularly valuable, and should be well considered by those at the north as well as at the south, for they are equally applicable to either section of the country.

For the American Agriculturist.

VIRGINIA AGRICULTURE.

Llangollen, Ky., October 23d, 1843.

Dear Sir:—After a lapse of eleven years, I have paid a visit to Virginia, my native state. Feeling a deep and filial interest in her prosperity, and in the welfare of her inhabitants, many of whom are my relations and friends, and all of them a noble race of generous, hospitable, and patriotic men, my attention was naturally turned to their *agriculture*—the basis of national prosperity, individual comfort, and independence.

When I left the state, a rapid tide of emigration to the south and west, was sweeping away much of her population and wealth, especially from the seaboard, and that portion of the state lying between the southwest mountains, and the head of tide-water in her fine navigable rivers. These are the sand-stone, quartz, and granite regions of Virginia; in many places underlayed by fine argillaceous earth. From the base of the southwest or little mountains westward, and from the valley, there was less emigration. Their argillaceous, calcareous, and slaty lands, adapted to wheat, grass, tobacco, and corn, withstood more firmly the impoverishing effects of a system of cultivation, which, though not so defective as that practised in the lower country, was far from the best now in use. Gypsum and clover found their way into the counties of Loudon, Albemarle, and other upland counties, long before I left the state. Timothy and other grasses for grazing, as well as for the scythe, were cultivated in the valley. But in the lower country, although a clover *patch* for soiling was common, and timothy and herds-grass for meadows, especially near the towns, were scattered through the state, there were but few *fields* of clover laid down for the improvement of the soil, and the timothy meadows were soon supplanted by *broom-straw*. To Col. John Taylor of Caroline, Lower Virginia is more indebted for his *Arator* and his agricultural conversations, than even the United States are for his political writings; and to Mr. Ruffin, the editor of the Farmers' Register, and the author of the essay on Calcareous Manures, the people of Lower Virginia, and indeed of the whole tide-water country on the Atlantic seaboard, owe a large debt of gratitude.

In the valley, (fine limestone and slate lands,) the grasses and clover, together with wheat and corn, are extensively cultivated. Large herds of cattle and hogs are raised or fed for market, and the improvement of their lands is in exact proportion to the attention paid to grasses and clover, and the observance of an ameliorating rotation of crops.

On the southern side of the southwest mountains, clover, tobacco, wheat, and corn, constitute the staples. I call clover one of the staples, because I consider it the basis of all good and profitable cultivation in that region; and it is certainly more extensively used than when I left the state. Hence the lands of those who use it are improving.

In the upper end of Louisa county, there are between ten and twelve thousand acres of land, (once in my opinion the bottom of a lake drained by the South Anna, one of the branches of the Pamunkey river,) remarkable for the production of wheat. There is perhaps no equal area of finer land for wheat in the world. They are called the *Green-Springs* land. Mingled with the gray argillaceous loam of these lands, there is much comminuted shot-iron ore. Can it be that this, disintegrating and mixing with the soil, attracts and fixes the ammonia, thus rendering the land so suitable for wheat? The intelligent landholders here use clover and grasses, and their lands are improving beyond their great natural fertility.

For some twenty miles below the Green Springs, the lands are very unequal in quality, and in the degree of improvement. Some judicious farmers, husbanding their manure, and cultivating clover, although growers of tobacco, are improving their lands. But the majority, I fear, are still pursuing the old ruinous system of exhausting crops without proper rotation, and without cultivated grasses to cover their naked fields. Such, when their lands are worn to the bone, and from the want of returns to the soil, will be forced to emigrate. These lands are quartz ore, with much silicious gravel.

Passing lower down, there is a strip of land on both sides of the North Anna, in Spottsylvania and Louisa counties, and the lower part of Orange, known as *the Forks* and *Ducking-Hole* neighborhoods, in which the lands are essentially different from the quartz-ore and silicious lands above and below them. They are undulating and hilly, with boulders of granite and gneiss, I believe, scattered sparsely over the lands, but in greater abundance near the North Anna. Much of this disintegrated rock is mingled with the argillaceous loam, and wherever it appears, the lands are productive in their original state, capable of easy and great improvement, and very lasting. Every particle of manure tells, and every leaf of clover adds to the fertility of this fine land. Its owners are becoming aware of its comparative value. Many of them are improving it steadily with clover and manures, and they are *reaping* the rich rewards of their labor.

From this strip of land to the head of tide-water on the rivers, the lands are more sandy, and poorer, except on the streams, where the bottoms are rich alluvial, and the hill-sides facing the streams, good tobacco lands, where they have not been worn out by successive crops, without returns of animal or vegetable matter to the soil. In this section of the state, there has been less general improvement than above or below, although I know that clover and gypsum, as well as barn-yard manure, ensure good returns for their liberal use. The spirit of improvement has reached some of the farmers and planters in this region; but they are rare exceptions to the general rule. Corn, wheat, and tobacco, are the staples.

Below the head of tide-water, great improvement on many farms has been the result of *marling*, and the successful introduction of the cultivated grasses and clover. You have doubtless seen an account of the wheat crop at Westover, and other places on James river, averaging 30 bushels to the acre. The use of marl, and the practice of covering the fields with grasses, is extending in all that region, so that the first lands settled in Virginia, and greatly exhausted by injudicious cultivation, are now, in my opinion, becoming the most valuable lands in the state. The means of improvement are as inexhaustible as the marl-banks; and the facilities of transportation, both for this, as well as for the productions of the farms, greater than in any other portion of the state.

The plows and farming tools generally are much improved since I left the state. Good rollers, thrashing-machines, and reaping-machines, are now in use. Two of the latter, one of which I saw, have been used near Richmond the last season, and I heard both spoken of as answering well. They are Hussey's, and McCormick's.

I was particularly struck with the improved style of farming in the neighborhood of Richmond. They have discovered that their lands, even those that are very sandy, can, by judicious management, be covered with grass. And this is the basis of agricultural improvement. Whenever the fields can be covered with a good coat of grass, so great a return of vegetable matter and manure from the animals consuming it, either on the fields or from soiling, or in the form of hay, is, or may be made to the lands, that with a judicious rotation of crops, instead of wearing out or deteriorating, the lands will become richer and more productive. The alluvial lands below tide-water were naturally very fertile, and those that were exhausted from long and unchanged crops, are, I believe, now recovering their pristine fertility under a better system. What a fine country it is! and what a fine race of men inhabit it!—Intellectual, brave, generous, and hospitable. There are no men in the world superior to the descendants of the cavaliers in Old Virginia. Many of them have removed to the west, and the south, actuated by the spirit of adventure, or driven by necessity, or lured by the wiles of land-speculators, or dazzled and blinded by the brightness of better lands beyond the mountains. Let those who remain in Lower Virginia, and who can now barely live on their lands, instantly begin to improve them. They are *easily improved;* and when improved, are more valuable than any they will obtain farther from the seaboard at the price of their improvements. Let them bear in mind, that land which brings only ten bushels of wheat, or 20 of corn to the acre, *where* these articles can be sold for $10 per acre only, is more valuable for cultivation, than land which will bring double those quantities, where the *prices* for them will be less for the produce of an acre. When oats were worth 30 cents a bushel, and corn 50 cents, in the city of Richmond, we could with difficulty obtain 12 cents for oats, and 20 cents for corn. Last year corn sold at 12 cents per bushel in Louisville.

Many years ago, the Hon. James M. Garnett, one of nature's noblemen, whose death we have been lately called to deplore, in an address to the Agricultural Society of Fredericksburg, of which I was at that time a member, stated some cases in which manure from cow-pens, I think, permitted to remain on the surface for some time before it was mingled with the soil by plowing, seemed to produce a more beneficial effect on the crop, than when immediately turned under. The idea was considered novel at that time. But in conversing with a very intelligent, observing, practical farmer near Richmond, during my late trip to Virginia, he assured me that his own experience had convinced him of its truth. And I observed in returning home, that many of the excellent farmers in Lancaster county, Pennsylvania, through which I passed on the way from Philadelphia to Pittsburg, plow their lands first, then scatter the lime and manure, and then barely mingle them with the surface-soil, by a light second plowing, instead of turning them deeply under. Now, as these men are successful practical tillers of the earth, I presume they would not pursue a system in the application of manure, unless *experience* had demonstrated its advantages. Is more fertilizing matter attracted from the atmosphere than is lost by evaporation?

I had no adequate idea of the quantity of lime used in the agriculture of Pennsylvania, till I passed through the state, and saw the numerous lime-kilns, and the piles of lime in the fields. What this substance is effecting for the interior, *marl* is doing for the seaboard. But the facilities of transportation, without the payment of tolls on turnpikes or railroads, gives a decided advantage to the dwellers on the navigable rivers, bays, and shores of the Atlantic.

With due attention to a proper rotation of crops, the collection and application of manure, marl, green sand, and lime, with in all cases a good cover of grass or clover, when the fields are not in summer cultivation, the land from Boston to Florida point, in my humble opinion, will be the most valuable in America; and certainly none along this extended line more valuable for soil, climate, or the productions to which they are adapted, than those of Lower Virginia. Let them appreciate their natural advantages, and improve them, and they need not encounter the toil, anxiety, and expense of removal to other localities less favored in all respects except one—richer land, less productive of profit though than theirs, if only moderately improved and properly cultivated.

I have only to add, that wherever I saw agricultural journals in the house, on my travels, I saw improvement on the farm. From this I was led to conclude, that agricultural publications, instead of making mere fireside farmers, as has been objected to them, tend to the reformation of bad farmers, and to make the good still better.

JOHN LEWIS.

For the American Agriculturist.

FINE WOOL SHEEP.

Galway, Saratoga Co., October 20, 1843.

I have noticed in your periodical several communications upon fine-woolled sheep, and sheep-husbandry, with which I am *well* pleased in *many* things. Yet there are one or two particulars, in your remarks upon "Fine-woolled Sheep," in the July No., also in the letter of Mr. Collins, in the September No., upon which, with your permission, I beg the privilege to offer a suggestion or two.

If I rightly understand you and Mr. Collins, you seem to take it for granted, that there are no flocks of Merino sheep in our country, which have not been so mixed up with the different varieties, as to make a complete "*olla 'podrida*;" and none from which pure bloods, of any distinct breed, could be obtained with which the American farmer might improve or renovate his flock, except the flock of Mr. C., recently imported from France. (*a*.)

Now, while it is lamentably too true, that a large proportion of wool-growers have greatly injured their flocks by the miserable crosses to which you allude, it is also true, that there are exceptions to this rule. I have a flock of Paular Merinos which I verily believe are of as *pure blood* as any imported from Spain.

The sheep from which mine descended, were imported by the Hon. William Jarvis of Wethersfield, Vermont, while consul to Spain. Mr. Alfred Hull of Wallingford, Vermont, procured a small flock of these Paulars some 20 years since, before they had been crossed with any other variety. He has uniformly *rejected* the different *improvements* which have been proposed, and has kept them unmixed with other breeds, and has now a fine flock of some 500, from which he is yearly supplying a large number of wool-growers with some of the very best full-blood Paular bucks. I commenced my flock by a selection from this flock of Mr. Hull's, five years since, and have not crossed them with any other variety. Mr. Hull is my brother-in-law, and I have been perfectly familiar with the history of his sheep. If we have not *pure* blood Paular Merinos, I know not what pure blood means.

Again, you say, speaking of Mr. Collins' Rambouillet Merinos, that "in their form they resemble the Paular Merinos. They are also from one tenth to one fifth larger in carcase—give more wool for their size, and of better quality."

In giving a more minute description of Mr. Collins' flock, you say, that "Grandee, Mr. Collins' imported buck, weighs 150 pounds—that one year's growth of wool, unwashed, weighed 12¾ lbs.—and his ewes averaged 6 lbs. 9 oz.; deduct one fourth for washing, leaves an average of 4 lbs. 15 oz." Now put these two statements together, and the reader would infer that the Paular Merinos were neither *very heavy* in carcase nor fleece. Whereas, the fact is, that it is not uncommon for bucks of the Paular breed to weigh from 160 to 180 lbs. at full growth. One of my stock bucks, only two years old in May last, was weighed a few days since in presence of several witnesses, and though not in extraordinary condition, his weight is full 150 pounds. (*b*.)

Nor is it uncommon for bucks of this breed to yield from 12 to 14 lbs., clean washed wool. (*c*.) I showed a buck last year, then but three years old, whose fleece weighed, *well washed*, 12 lbs. 11 oz. I sold that buck with several others to a gentleman from Wisconsin. Had I kept him, until this year, when he would have been full mouthed, I have no doubt he would have given 14 lbs.; as bucks of this breed frequently do that at full growth. I sheared in June last 90 sheep—62 breeding ewes, 27 yearlings, and 1 buck two years old. The weight of the 90 fleeces, washed very clean, and free from filth of every kind, is 478 lbs. 9 oz.; being an average of 5 lbs. 5 oz. per head of *clean washed* wool.

I have sold from my flock all the bucks I could raise at $10 per head, and am by no means able to supply the demand. You speak of the comparative fineness of the Rambouillet and Paular wool. I have no means by which I can form an opinion in this respect, but will only say that I have sold the wool from my Paular flock this year, to a manufacturer for 40 cents per pound; being $2.12½ per fleece. *Perhaps* the Rambouillet wool is very much finer. (*d*.)

We do not claim that the Paular is as fine as the full-blood Saxony; but the weight of fleece we believe *equal* to any fine-woolled sheep now in America. Neither are they surpassed in beauty of form, weight of carcase, and strength of constitution, by any of the fine-woolled varieties that I have ever seen, or an account of which has fallen under my observation.

R. A. AVERY.

(*a*). What Mr. Collins' views about the purity of Merinos in this country are, we shall leave him to explain for himself. We spoke of the mixture of those sheep with others as a *general* thing, which Mr. Avery acknowledges in his next paragraph. He should be more particular in stating what we said, as his construction of our meaning in this last sentence is entirely different from what we wrote. For "*none* from which pure bloods, &c., could be obtained, &c., *except* the flock of Mr. C.," read, "*among* those pure-bred *flocks*, &c., that undoubtedly superior to all others *within our knowledge*." (See page 99 of current volume of this paper.) "None" and "except" are quite different words from "among" and "within our knowledge."

(*b.*) If Mr. Collins' Grandee was put in high condition, we are confident he would weigh 200 lbs. easily. If Mr. Avery has Paular Merinos which "it is not uncommon to weigh from 160 to 180 lbs.," we can only say that such weights are very *uncommon* among any pure-breds that we ever saw, and we have inspected thousands bred in this country, and some hundreds imported direct from Spain. Several gentlemen of our acquaintance who have kept Paular Merinos, which they procured from Col. Humphrey's importation, corroborate the above assertion.

(*c.*) We wish Mr. Avery would send us a clean washed fleece weighing 12 to 14 lbs., for we never saw such a one from any fine-woolled sheep's back of a pure breed, save the Rambouillet. If he will, we promise to pay him its full value. The only true test of *clean* wool is to *scour* it ready for manufacturing. Mr. Collins' *unwashed* wool *we know* to be quite as *clear of dirt* as many a lot *clean washed*. We say all this without meaning to question the fact that Mr. Avery's wool is not clean and thoroughly washed. We did not state the whole truth regarding the clip of Mr. Collins' sheep, for he was too modest to allow us to do so, saying the story would not be believed. We now say, that several of the ewes' fleeces weighed from 8 to 9 lbs., and one weighed 10 lbs., free of all tags, and very clean wool for unwashed. It was one year's growth only. We have sent Mr. Avery a sample of this wool, that he may judge of its quality. The wool of the Rambouillets is *very even* over the whole body, being nearly as fine on the rumps and thighs, as on the back, which makes a great difference in the value of a fleece, for it samples principally as *first* and *second* qualities, leaving scarce anything for the *third* and *fourth*. We beg especial attention to this fact.

(*d.*) Since the above was in type, Mr. Avery has called at our office with samples of his wool. They are certainly very fine and even; but whether these were *average specimens* of the *whole fleece* Mr. Avery could not say. To decide the relative merits between Mr. Collins' and Mr. Avery's sheep, in their wool, it would be necessary to compare the fleeces of both together; for it is not a *fine lock here and there* chosen from a sheep's back, which shows the value of a fleece, when there is *coarse wool* enough on *other parts to counterbalance* this; but it is the *general evenness of the whole fleece*, as remarked above, and herein consists, as we contend, *one of the chief excellencies* of the Spanish Merinos at Rambouillet. He assures us that Mr. Hull, of whom he obtained his flock, purchased them in the year 1823, before the Saxons were brought into this country; they could not, therefore, have any cross of this blood in them; and Mr. Hull has continued to breed them free from any other than his own blood of Paular Merinos. From Mr. Avery's description, also, we have no doubt that his Paulars have increased in size since coming into his possession, and that they have been improved in their forms, he having bred with an eye to both of these points. If, therefore, this be correct, what we have said about the weight of Paular Merinos under note (*b*) will not apply to his sheep. It is our intention to visit Mr. Avery's flock at shearing time next year, and be able to judge more particularly for ourselves; the public shall then hear from us again on these matters, for we are desirous of giving every breeder all the justice that is due him. We go for the best animals without any reference to those who own or have bred them.

For the American Agriculturist.

SUPERIOR BREAD.

Melt 2 oz. of butter in a pint of warm water, then add a small tea-spoonful of salt, 1½ lbs. of flour, and two table-spoonfuls of yest. Now beat well the yolks of 3 eggs and stir them in, then beat the whites to a stiff froth and stir them in also. They must be the last thing put in. Beat the whole well together from 8 to 10 minutes, or until the mixture will not adhere to the spoon. Fill the pans about three quarters full and set it to rise, which will take from 3 to 4 hours. It must be baked in the pans in which it is set to rise, and is to be eaten moderately warm.

A Dutchess County Lady.

For the American Agriculturist.

SOAP-STONE GRIDDLES.

As the season of *pancakes* is coming on, it may be interesting to some of your readers to know, that a griddle made of soap-stone is greatly superior to the ordinary kind made of cast iron. They require less greasing, and are not subject to the frequent changes of heat and cold which occur to the thin iron ones. They should be of any size required, and about ¾ to 1 inch in thickness. I have one in use, and the cakes baked on it are better than from the ordinary kind, and it is giving greater satisfaction to those in the culinary department.

C. S. Jr.

For the American Agriculturist.

MOVEABLE FENCE.

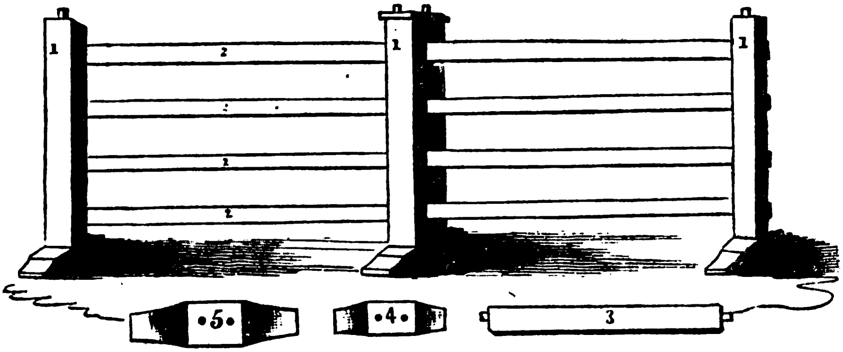
New York, November 6th, 1843.

When I visited the beautiful farm of J. F. Sheafe, Esq., at High Cliff, Dutchess county, the past summer, among other things which struck my attention there, was a moveable fence; and, as it is both handsomer and cheaper than the usual method of making these, as in England, of hurdles, I have thought a description of it might not be without interest to those desiring to put up something of this kind.

1, 1, 1, are posts made of joist, 3 inches by 4, and 4 feet long, with 2-inch pivots in each end, to fit into the holes of the cap 4, and step 5; 2, 2, 2, 2, are slats 12 feet long, 4 inches wide, and 1 inch thick, nailed to the posts 1, 1, 1, making each four slats with their posts, an independent length of fence; 3, is a post the same as 1, 1, 1; 4, is a cap of white oak plank, 12 inches long, 7 inches wide, and 2 inches thick, with two 2-inch auger-holes bored through it at proper distances, into which to insert the top pivots of two of the posts when set upright, to form the fence; 5, is a step, a piece of plank the same as the cap 4, but 3 feet long. It has two holes for the lower pivots of the posts to fit in, corresponding with those in the caps.

Two boys can take down or put up 40 rods of such a fence in an hour; and it is so light, that it can be transported to any part of the farm with great ease. When neatly made and painted, it has a handsome appearance, and proves an effectual guard for all orderly stock. By taking it down in the winter, and putting it under cover, it will last a long time. It may be made very cheap by using slabs for the caps and steps, and split poles for the slats.

MOVEABLE FENCE.—(Fig. 57.)



Mr. Sheafe showed me another kind of moveable fence with pickets, which I may describe hereafter; but I rather prefer this as being more simple.

S. Allen.

For the American Agriculturist.

CORN FOR SOILING AND FODDER.

Rahway, N. J. November, 6th, 1843.

The past season I sowed some corn broad-cast, and at the same time planted some with the drill by way of comparison and experiment. My drill is an English machine, such as they use for drilling beans. It sows the rows three feet apart, which allows the cultivator to work between them. I plant two rows six inches apart, and three double rows three feet from each other. The under leaves of the drilled corn remained green, while the broad cast turned yellow nearly to the top; and I am of the opinion decidedly, from this experiment, that drilling is much the best method, for it gives more and better fodder. I had nine good wagon-loads from less than an acre of land, when it was about two thirds cured. I have husked a part of this, and am of opinion it will turn out 25 bushels of shelled corn to the acre. Going through it once with the plow, and once with the cultivator, was all the after-culture. The fodder is of the best quality. The ground should be well manured.

Buckwheat.—The common time for sowing buckwheat with us, is from the 12th to the 15th July. Owing to the drought this year, my buckwheat was not sown until the 27th and 28th. The ground was extremely dry and dusty, and the growth was tardy, comparatively, until the rains of September. On the 28th we had a severe frost. I cut down the buckwheat at once, green as it was. Not one half of the grain had turned black; the top of the straw being much of it in flower, and nearly half the grain in the milk. Soon after this I raked it up in bunches, and let it stand until the middle of October, when I thrashed it, and to my surprise, few imperfect kernels were to be seen—nearly the whole was plump and fully ripe. My opinion is that two causes operated to ripen the berry after cutting the buckwheat. The first was its being bunched up, thus preventing the sun from withering it; and the second, that there was juice enough in the stock to fill out the grain. This also shows that a crop of buckwheat may be raised even if it is sowed as late as the last of July.

C. Baker.

For the American Agriculturist.

MANUFACTURING INDIGO.

About the year 1797, I bought in London two chests of indigo, said by the seller to have been manufactured by the late General Wade Hampton of South Carolina. It was a brilliant, copper-colored indigo, and proved in consumption equal to any Bengal I ever used. Some twenty years since I opened a correspondence with General Hampton on the subject of manufacturing indigo in this country, when he informed me "that raising cotton paid the planter much better than cultivating the indigo plant; that the manufacture was injurious to the health of the workmen; and that the art of manufacturing it was lost in this country, at least in the most essential particulars, for want of a continuous practice."

In the year 1828 I corresponded with Elias Horry, Esq., then chairman of the Charleston Agricultural Society, on the subject of indigo and madder. The following is an extract from Mr. Horry's letter in answer: "Our Agricultural Society will consider itself much obliged by the important and scientific information which you have communicated, respecting those valuable dye-stuffs. I have placed your letter into the hands of the Editor of the Southern Agriculturist, in order that the information it affords respecting indigo and madder may be known as soon as possible."

In the month of March, 1830, I sent an article to B. Silliman, Esq., Editor of the Journal of Science, more extended than the former, which was published in the number for May of that year.

In the years 1828 and 1830, cotton afforded to the planter so large a profit, that no attention was then paid to the cultivation of minor articles; but so little profit is now derived from this cultivation, that madder, sumach, and indigo, particularly the two last, as being annual crops, will be far more lucrative. I am induced, therefore, to send you a copy of what I have formerly written on indigo, that it may be again brought to the notice of our southern agriculturists.

The value of the indigo consumed in this country in 1829, can not be estimated at less than two millions of dollars. Of the quantity consumed, there was made in the United States about two hundred thousand pounds, or one tenth part of the consumption. As the consumption is rapidly increasing, from the increase of population from the extension of manufactures already established, and from the introduction of new articles of manufacture, I consider it an object of national importance, that it should be better made, and more extensively cultivated in this country.

I have been acquainted with the indigo market for more than thirty years, and never remember it in so depressed a state as it has been for the last twelve months. The average price of the sales for the last year can not have been much over one dollar per pound. The average price of the imported has been about one dollar and fifteen cents, and of that made in this country, about fifty cents. To endeavor to give such instruction to the planters as will enable them to make an article fully equal to the imported, is the object of this communication.

The quantity of indigo made from an acre of the plant has been differently estimated by almost every maker from whom I have obtained information. General Wade Hampton, who many years since made the article in South Carolina, informed me, that he obtained sixteen pounds of fine indigo from the plant taken from a half acre, or thirty-two pounds per acre. Other estimates make the quantity much larger, some nearly two hundred pounds to the acre. Taking the average of the different estimates, it would be at least fifty pounds. It will appear by this estimate, that it would require forty thousand acres of land to raise a supply for the present consumption; and as the demand is rapidly increasing, it is more than probable, that in ten years, it will require the product of eighty thousand acres to raise a supply for home consumption.

There are four points to be attended to in the making of indigo, which require much judgment, aided by practical skill. These are, the time of cutting the plant, the degree of fermentation to be given in the steeper, the degree of oxydizement of the coloring feculæ, and the extrication of foreign matter from the pulp after the indigo is made. Three of these processes being purely chemical, it is not, therefore, surprising that ordinary workmen should frequently fail in producing a good article. There is probably more loss sustained by our planters from the ignorance of the operators, than the whole value of the article now sold.

The plant should be cut when at maturity, as it will then afford a fine color; but if cut too late, a portion of the color is then lost, and an indigo of worse quality is obtained. Mr. Dalrymple informed me, that the plant should be cut when in full flower, after the weather for some days has been dry. Another celebrated maker of indigo, asserts that if the plants are suffered to stand till they run into flower, the leaves become too dry and hard, and the indigo obtained from them proves less in quantity and less beautiful; the due point of maturity is known by the leaves beginning to grow less supple, or more brittle.

It appears that the makers of indigo differ as to the time of gathering the plant. It is greatly to the interest of our planter that they should ascertain, by direct experiment, the proper time of gathering the plant.

When the plant is gathered, it has to undergo a process by immersion in water, for the purpose of extracting its coloring matter. This operation is performed in two ways—by fermenting the green plant in a steeper, or by first drying the leaves and then simmering them in a boiler. The latter process is now pursued by some of the best makers in Bengal, and has apparently an advantage over the old process.

When the green plant is fermented in a steeper, and the process is carried a little too far, the coloring matter will become dark, and is said to be burnt—if carried a slight degree farther it will be black, and of course the indigo will be very much injured. Nine tenths of the indigo made in the United States partakes more or less of this character, and has evidently been injured by an excessive fermentation. To observe a due degree of fermentation in the steeper is the most difficult point in the whole process of making indigo; for should not the fermentation be carried far enough, a considerable loss of coloring matter will be the result. It is necessary, therefore, to carry it on to a certain point, and to draw it off the instant it arrives at that point; and this can only be known by a skilful observer who has obtained his knowledge by practice.

There is no chemical operation so difficult to describe as that of fermentation, and I almost despair of making myself clearly understood by practical workmen in the following description of the steeping process.

Fermentation has been divided by chemists into four kinds, the panary, vinous, acetic, and putrefactive. The kind of fermentation given in the indigo-steeper is evidently of that kind called panary, or the first stage of fermentation. It is known to be the panary by the large quantity of carbonic gas given out, which, rising to the surface, floats on the top, covered with a thin pellicle of the liquid. The difficult point for the operator to distinguish is when it arrives at that degree of fermentation, and begins to assume the acetic. The same difficulty occurs with the woollen blue dyer; and the losses so frequently complained of by the vats being out of order, and often being irrevocably lost, arise from the fermentation being permitted to proceed too far.

The following directions are given as a guide for those who may be engaged in the making of indigo. While the plant is in steep, draw off a little of the water, and with a pen dipped in it make a few strokes on white paper. The first will probably be high-colored, in which case the indigo is not sufficiently fermented. This operation is to be repeated every quarter of an hour, until it loses its color, when it will have arrived at its true point of fermentation.

Let a small hole be made in the stopper, six or eight inches from the bottom, exclusive of the opening or aperture, for drawing off the impregnated water. Let this hole be stopped with a plug, yet not so firmly but that a small stream may be permitted to ooze through it. After the plants have been steeped some hours, the fluid oozing out will appear beautifully green, and at the lower edge of the cistern, whence it drops into the battery, it will turn of a copperish color. This copperish hue, as the fermentation continues, will gradually ascend upward to the plug, and when this circumstance is perceived, it is proper to stop the fermentation.

During the progress of this part of the business, particular attention should be paid to the smell of the liquor which weeps from the aperture, for should it discover any sourness, it will be necessary to let the fermenting liquor run immediately into the battery, and lime-water of sufficient strength must be added, until it has lost its sourness. As it is running off it will appear green, mixed with a bright yellow or straw color, but in the battery it will be of a beautiful green.

Another maker has given the following description of the fermenting process.

When the plant is gathered, a large quantity is put into a vat, and some wood laid above to prevent its rising above the water. The mass begins to ferment sooner or later, according to the warmth of the weather, and the maturity of the plant—sometimes in six or eight hours, and sometimes in not less than twenty. The greener the plant, the more rapid the fermentation. The liquor grows hot, throws up a plentiful froth, thickens by degrees, and acquires a blue color inclining to a violet—at this time, without touching the herb, the liquor impregnated with the tincture is let out, by cocks in the bottom, into another vat placed for that purpose, so as to be commanded by the first.

The boiling process, for extracting the color from the dry plant, was obtained from Mr. Dalrymple, who had for many years been an extensive indigo maker in Bengal. He says: "Take an iron, brass, or copper boiler, fill it within three inches of the top with the plants, press down with stones, and cover the plants with water. The liquor must be heated, not until it boils, but until it begins to blubber, or simmer. The water, by this time, will look greenish, then draw it off into a shallow vessel or vat, and beat for one or two hours to incorporate oxygen with it. On taking some of the liquor in a white saucer, little particles will appear in it as big as a pin's head and smaller, then stop beating, and throw in a little lime-water, upon which the indigo will precipitate to the bottom, and the supernatant water will look like brandy. The water has now to be drained off to a level with the top of the sediment, lay the sediment on a cloth to drain, and when stiff enough put it into moulds to dry.

I have been recently informed, that many first-rate makers of indigo in Bengal condemn the practice of obtaining it from the dried leaves, on the plea that the article obtained is no better, and is much less in quantity. If any of our planters should be disposed to try the process, it will be necessary to inform them, that should the leaves, between gathering and drying, be subject to fermentation, only a small portion of coloring matter will be obtained, and that the loss sustained will be as the degree of fermentation.

During the precipitation of the coloring feculæ the coarsest particles, possessing the greatest specific gravity, subside first, constituting the lower strata of the pulp, and the lighter and finer particles subsiding the last, form the upper part. It is necessary that indigo-makers should take advantage of this circumstance, by first taking off the upper layer, and moulding it by itself, and the lower by itself. By this means they may obtain several qualities of indigo from one mass of pulp.

It appears from analysis made by Bergman, Quatremere, and other chemists, that indigo of good quality does not contain more than from 46 to 47 per cent. of coloring matter, and that the very best samples do not contain more than 48 per cent.

The following table will exhibit an analysis of indigo of good quality, and of the menstruua in which the impurities are soluble.

Mucilaginous parts separable by water - -	12
Resinous parts soluble in alcohol - - -	6

Earthy parts soluble in acetic acid -	- 22
Oxyde of iron soluble in muriatic acid -	- 13
Coloring parts almost pure - - -	- 47
	100

There can not be a doubt that manufacturers of indigo might produce, by attending to the analysis made by chemists, an article far superior to any hitherto offered to the public. It will also appear certain, when experience shall have confirmed the value of a superior indigo, that a more than remunerating price could be obtained for a purer article. For certain purposes a pure indigo would command double, and even treble prices, provided the supply were not too great for the consumption. This being the case, it would be well for our manufacturers to pay some attention to the subject, and endeavor, by some easy, unexpensive process, to bring it to as great perfection as possible. To promote this object, I offer the following extracts and observations.

Bergman dissolved, by means of ebullition in water, a ninth part of the weight of indigo. Quatremere also separated, by means of water, the parts which are soluble. He states their quantity to be more considerable, the worse the quality of the indigo; and that, after this operation, the residuum has acquired the qualities of the finest indigo. He therefore proposes to purify what is of inferior quality, by boiling it in a bag, and renewing the water till it ceases to acquire color.

If sulphuric acid be diluted with water, it attacks only the earthy matter that is blended with the indigo, and some mucilaginous ingredients.

Muriatic acid digested or even boiled with indigo, takes up the earthy part, the iron, and a little extractive matter, which colors it yellowish brown, but without attacking in any manner the blue color.

Acetic acid, commonly known as vinegar, appears, by the table of contents, to take up a larger portion of impurities than any other acid, and being at the same time the cheapest, I would recommend our indigo-makers to boil their pulp in vinegar and water; by which process the whole mass will be superior to any indigo now offered in the market.

It is evident from the analysis, that to make indigo far superior to any now brought to market, requires only an application of known facts to the art of making it. The following are well ascertained facts, that if indigo be boiled in water containing muriatic acid, twenty-five per cent. of the impurities contained in the best samples would be extracted, or if in vinegar and water thirty-four per cent.

The best Bengal indigo, and I never remember it in a more depressed state, is worth, wholesale, one dollar eighty cents per pound. The average value of all the indigo imported from foreign countries is about one dollar and fifteen cents per pound, while the average value of that made in the United States is not more than fifty cents, and this great difference in the value is owing almost entirely to the great impurity of the article. The first object with our manufacturers, therefore, should be to make their indigo equal in quality to the best Bengal, and the second, to go as far beyond them as is practicable.

In the best samples of the indigo of this country, there is evidently too much extractive matter, and there is no doubt that this defect arises, in a great measure, from their taking the pulp from the beater, instead of their running it into a vat of clear water, and after well agitating it there, letting it settle in the third vat. This third receiver should undoubtedly be added where it has not been already done. Those manufacturers who would wish to avoid the expense of a third receiver, may fill up the beater with fresh water, after drawing off the first liquor, and perform the operation in the same vat.

The greatest improvement I can at present suggest, would be to boil the pulp taken from the vat by steam heat, for fifteen or twenty minutes, in water containing as much muriatic acid, or strong vinegar, as would give to the liquor a strong acid taste. This operation can also be performed by placing a pipe in the beater from any steam vessel.

Muriatic, or acetic acid, besides the oxyde of iron, dissolve the carbonate of lime, red resin, and alumina, contained in the indigo, and by being mixed with water, the greater portion of the extractive matter would be taken up at the same time. By boiling the pulp in water strongly impregnated with these acids, the indigo remaining would be from twenty-five to thirty-four per cent. better than any hitherto made, and a price, more than equivalent to the difference in the loss of weight and expense of working, would be obtained from the consumer.

I have been informed by some South Carolina planters, that, owing to their inability to proceed with the fermentative operation as rapidly as the crops require, a portion is often left on the fields for two or three weeks after the plants have arrived at maturity. This circumstance alone is sufficient to blast the interest of the planters. Their interest would be much better consulted, by gathering in the crop, drying it, and extracting the coloring matter by the simmering process. This difficulty is obviated in Bengal by their planting the seed in successive periods, so that one crop shall ripen a week or more after the other, each crop being sufficient to supply one set of tanks during the period of maturity.

Dyers as well as indigo-planters would be highly benefited by attending to the analysis of indigo. Were they, when a superior color is wanted, to boil the ground indigo in a bag as described by Quatremere, there would be no difficulty of obtaining the desired result from indigo of any quality.

Of the two essential objections, stated by the late General Wade Hampton—the first, " that cotton paid better than indigo," has been reversed by the great depression in the value of cotton. The second, " that it injured the health of the negro," may no doubt be easily obviated by precautionary means. The beating process is probably the sole cause of the unhealthiness of the manufacture. So rapid is the absorption of oxygen by the coloring feculæ, during the process of beating by the workmen, as to render the surrounding atmosphere totally unfit to sustain life; those workmen, therefore, who are standing immediately over it, must be seriously injured. There are thousands of ingenious Yankees who could construct a machine to be turned either by man or horse-power, that would do the work more completely than hand beating, and the horse or men employed be at sufficient distance from the vat to sustain no injury. I presume that ten or fifteen feet from the vat would render the operation perfectly safe.

William Partridge.

From the numerous communications with which we have been favored, upon the late course and conduct of that immaculate journal, which *modestly* styles itself, "A *Farmer's Library* of the *most comprehensive* kind"—"The *best exponent* of American Agriculture, both at home and abroad"—"Not only the cheapest but the *best Encyclopedia of Practical* Agriculture existing," &c., &c., we select the following *jeu d'esprit*, as hitting off a couple of its gross errors and absurdities in admirable style. We only regret that the writer has not given his own name to the communication; but we think his "neighbors," who proved so obstinate at conversion, will not be slow to recognise the sound jurist and eminent practical farmer in his good-humored witticisms. We must confess, to our sorrow, that we are really quite unable to give our correspondent any information upon the subject of determining the ages of horned sheep by the rings upon them, being in that respect in as great a dilemma as himself; for at the late Orange County Show, we had the curiosity to count the rings on the horns of three Merino bucks, and found one had 53, a second 57, and a third 62! yet the owner declared, upon questioning him, that the first two were only 3 years old respectively, and the last 4 years old. In its October No., the Cultivator says, that "the improvement of animals, or the science of crossing, we consider as but in *comparative infancy*." Perhaps the cattle that *shed* their horns at 3 years old, and the sheep which indicate their ages by *rings* upon their horns, are the result of this improved, scientific crossing, which for a long time has been silently pursued by these very *learned*, *practical*, and *experienced breeders*, and with which results the world is soon destined to be astonished. We must fain refer "A Learner" to the editors of the Cultivator, not doubting that he will be able to obtain from them full information upon the points which seem to have got him into so much hot water with his neighbors. But a truce to badinage. There is scarcely a number of the Cultivator which does not contain more or less gross errors on nearly every subject upon which it attempts to write; to point these out were an endless task, and we henceforth dismiss it with the contempt which it merits. We can only say to all those desirous of countenancing humbug, they will now find plenty of it in its stupid pages. From its definition of the word "shed," &c., the next publication which we shall look for from this renowned press, is an "Improved" Dictionary, when Johnson, Walker, and Webster, may consider themselves as laid on the shelf, and no longer as authority in the matter of defining words.

For the American Agriculturist.

AGES OF ANIMALS

Mr. Editor:—I have read your rejoinder to the rebuke of the Albany Cultivator, and although you make out a pretty fair case for yourself, yet after all, I think I can convince you that it is somewhat *presumptuous* on your part, to compare yourself in any respect with men of the *practical* knowledge and *accurate* observation of the editors of that paper. You may, to be sure, have been conversant with the various breeds of cattle in England; you may know what constitutes a fine animal; may understand the principles of correct breeding, even better than the editor of the Albany Cultivator, as I think it is very evident you do, from your criticism upon the communication in that paper, which gave such offence; but after all, when you come to look into the peculiarities of the different races of animals which occupy so much of the attention of farmers, and to investigate their distinctive habits, I think I can show, and that you will frankly admit, that you are far behind the above *able* agricultural journalists.

To do this, I will refer you to the August number of the Cultivator, page 134, where you will find an editorial article upon the "Age of Animals." It is there stated, that "the ages of all horned sheep may be known by their horns, which show a ring annually to the end of their lives." Now I have reared many sheep, but for the want of that intimate knowledge and accurate observation of their peculiar habits, which so distinguish the editors of the Albany Cultivator, I had never learned this important fact before; and I presume you, and the great mass of your readers will admit they are indebted to these same gentlemen for this piece of useful information. I made a practical application of this knowledge during our last cattle show. I placed myself beside the sheep-pens, where there were very many fine-looking, and apparently young bucks, of various breeds. I stood there just as the committee were coming round to make their examination, preparatory to awarding premiums, with the Albany Cultivator in my pocket, determined to expose the owners of the bucks, if I found them misrepresenting their ages to the committee, as they had to me.

The first buck examined was indeed a fine-looking one, considering that he had seen upward of *fifty* winters, with a magnificent pair of horns. The owner stated him to be *three* years old *only*!

"Gentlemen," said I, "this man is imposing upon you; that buck is upward of *fifty* years old."

The chairman of the committee smiled, and some of the other members looked as though they thought a deranged man should not be permitted to interrupt their proceedings. I was not disturbed at this, for I was enjoying in anticipation the triumph I was about to achieve over them by the aid of the Albany Cultivator. The chairman made a remark, designed to illustrate the absurdity of my supposition, that a sheep could live fifty years; whereupon, I drew from my pocket the August number of the Albany Cultivator, and at page 134 read to the committee, as follows:—

"*The ages of all horned sheep may be known by their horns, which show a ring annually to the end of their lives.*"

"Now," said I, "gentlemen, be good enough to count the rings on that buck's horns, and you will find, as I have, that they are over fifty!"

This was the moment of my triumph. It was, however, but for a moment. I found that knowledge, such as I derived from the Albany Cultivator, was doomed to be trampled upon by ignorance. The chairman said bluntly, that they knew more about sheep than all that, and that what I had read was "book-farming," which they did not think much of, and walked on, leaving me to be laughed at by a set of ignorant boys, for saying that a sheep was more than *fifty* years old. I know, however, that you, Mr. Editor, will more properly appreciate such knowledge, and will, without questioning this mode of determining the ages of "horned sheep," admit that it is new to you.

Again, in the next paragraph of the same article, the editors, speaking of the mode of ascertaining the ages of cattle, remark, that "horns are shed at the end of three years, and they are replaced by other horns, which, like the second teeth, always remain."

Is it possible, said I to myself, when I read this paragraph, that I have been familiar with young stock from my childhood, and never have noticed this curious fact! It must, however, be so; for here it is in black and white, in the Albany Cultivator; though I am sure they have neglected to state another curious fact necessarily connected with this, but which they undoubtedly know, and that is, the new horns *spring out like mushrooms in one night, as large as the horns shed;* for all my three-year-old stock have new horns, larger than those they had last winter. Thus I satisfied myself, for the want of that accurate observation which would have led me long ago to know this curious phenomenon. Having, however, learned it, I was determined to have a little of that sort of half-malicious enjoyment which arises from showing that you know more than your neighbors; and moreover, I thought this upon the whole justifiable, from the fact that they had refused to take the Cultivator, though I had from year to year urged them to do it. So with the August number of that "*valuable paper*," as all the correspondents say, in my pocket, I happened over to my next neighbor's, and found him with his three boys, situated exactly right for displaying my knowledge. They were carting out the compost-heap upon the meadow, for top dressing, with a pair of three-year-old steers before the old oxen, by way of training them more perfectly. After a few common-place remarks, I asked him if he knew those steers shed their horns next spring? and that all cattle shed their horns at three years old? The old gentleman's shovel at once rested upon the ground; his under jaw fell a little; and after gazing at me for nearly a minute, with an inexpressible wonder depicted in his face, he said, "What upon airth are you talking about?" The boys seemed ready to roar with laughter; but respect for the old gentleman, and perhaps a little for myself, restrained them. I told him it was truly so, and I could prove it; and again with an air of confident triumph, drew forth the August number of the Albany Cultivator, and read the passage above quoted, remarking that though such knowledge was of no very great practical benefit, still it was pleasant to understand the peculiar habits of the animals with which we are so familiar, and that his ignorance of this curious fact, showed how much he had lost by not following my advice, and taking the Cultivator. But here again I was met by the incredulity of ignorance. The old gentleman maintained there was no such thing as young cattle shedding their horns, and said if I had no better reason than that to urge in favor of his taking the Cultivator, he should never take it, adding the usual sneer upon "book-farming."

Now Mr. Editor, will you aid me in this matter, and give me the result of your observation on the method of determining the age of "horned sheep" by the "rings on their horns;" and especially give me some further proof that cattle shed their horns at the "end of three years, which are replaced by other horns, which, like the second teeth, always remain," so that I may convince my obstinate neighbor of a fact which he has failed to notice through a long life, though during all that time he has been familiar with cattle of all ages.

A Learner.

P. S. Since writing the foregoing, the October number of the Albany Cultivator has come to hand, and I learn from a note of the editors on the first page, that *my ignorance* of the import of common language has led me into an error, and that I shall be obliged to explain to my neighbor, lest through that ignorance the reputation of the Cultivator should suffer. I shall tell him that the "shedding of horns" means, that they become a little "loosened" at the end of three years, and that by "being replaced by other horns, which, like the second teeth, always remain," means, that the old horns only become tight again! By the way, how very interesting and wonderful is this obliging habit on the part of the horns, to become "loosened annually, so as to allow a lengthening of the bone of the horn," as without this obliging habit, "growth would be difficult, if not impossible." Query. Is it not owing to an absence of this obliging habit on the part of the horn toward the bone, that the Durhams have such short horns?

I will only add, that as the editors of the Cultivator speak of the "shedding of teeth" in the same paragraph in which the "shedding of horns" is mentioned, that they must of course use the term in both places with the same meaning, and that, therefore, the old teeth do not fall out, but that the enamel of the tooth becomes loosened only, so as to "allow the growth of the bone."

Oct. 9th, 1843.

THRIFT AND CHARACTER OF THE TUSCAN PEASANTRY.

M. De Sismondi, author of the Fall of the Roman Empire, who had an estate in Tuscany, and was thoroughly acquainted with the character and condition of the country and its inhabitants, gives us the following delightful picture of the thrift and character of the Tuscan Peasantry. It certainly represents a very happy state of society; one which, compared with the restless, changing, ambitious character of our own population, leaves us little we think to boast of. The true philosophy of a happy life, has ever seemed to us to consist more in circumscribing than in increasing our wants and desires.

The land is cultivated for the proprietor on shares, he furnishing the land, house, and implements, and receiving half the product. The metayer, (peasant,) receives from the hand of Nature his whole subsistence. He has little want of money, for he has scarcely any payment to make. He hardly knows the existence of taxes, for they are paid by the proprietor; and as he has nothing to quarrel about with the government, he is in general attached to it. Neither has he any interest to settle with the church, tithes having long ago been abolished. He is a partner with his proprietor in interest, and has nothing to discuss with him, usage having fixed his rights and obligations. His contract may, it is true, be broken any year by his misconduct; but experience teaches the proprietor that he loses and never gains by discarding a peasant. Thus he lives on the land as if it were his inheritance, loving it devotedly, and laboring to improve it, and believing that it will be cultivated by his children and grandchildren. They understand it with a precision that the feeling of property alone can give. The terraces elevated one above another, are often not more than 4 feet wide, and the character of each is known to the metayer; this is dry, that is too cold and damp; here the soil is deep, there it is merely the incrustation of a rock; wheat thrives best here, barley there; here it would be lost labor to plant Indian corn, even beans or pease; a little farther flax flourishes wonderfully, and the border of this brook is wonderful for hemp. Thus in a space of 10 acres, the soil, the aspect, and the lay of the land, present a greater variety than a rich farmer finds on 500 or 600 acres.

The gentleness and benevolence of the Tuscan character are often spoken of; the reason is, that all cause of quarrel is removed from the cultivators, who constitute three fourths of the population.

When you leave the great roads, and climb up the hills of the valley of Nievole, you meet at every step little paths, which, winding among the vines and olives, are never traced by a wheel, and are only passable for mountain-horses with their loads. Among these paths, you meet at every hundred steps, upon some flowery hill-side, a little house, which presents the sweet image of industry fully rewarded, of man's love of the land, of abundance and peace. The house is substantially built with good walls, and has always one, and often two stories above the ground floor. The most spacious and airy of the rooms are devoted in May or June to the growth of the silk-worm.

All the linen and working-dresses of the family are home-made. One can hardly imagine the quantity of linen and linsey-woolsey the women accumulate by assiduous labor.

The following is an inventory *of the bridal clothes of one of a family living on the half product of ten acres of land*, their circumstances being about an average of this class:—28 chemises, 3 gowns of colored silk, 4 gowns of coarse ditto, 7 gowns of cotton cloth, 2 winter working gowns, 2 summer ditto, and skirts, 3 white skirts, 5 calico aprons, 1 black silk apron, 1 merino ditto, 9 colored working ditto, 4 white handkerchiefs, 8 colored ditto, 3 worked veils, 3 towels, 14 pairs of stockings, 2 hats, 2 gold cameos, 2 gold ear-rings, &c., &c. Truly, a fitting example for our enlightened and more highly-favored country women. R. L. A.

Translated for the Gardeners' Chronicle,
from the German of Dr. Hugo Mohl.

REVIEW OF LEIBIG'S VEGETABLE PHYSIOLOGY.

(Concluded from Page 270.)

In a subsequent part of this chapter Dr. Liebig expresses his surprise, that in all the works of Agronomists and Physiologists, one looks in vain for the leading principles of cultivation; nevertheless, at the end of this part of his work, he states that cultivation supplies every plant with that sort of food which it requires for the development of such organs or substances as are most available to man. He further dwells on the means of arriving at that end, viz., the chemical analysis of the inorganic ingredients of soil. But these latter facts, says Dr. Mohl, were known long before Liebig, Charles Sprengel having written a series of memoirs, to demonstrate the importance of the inorganic ingredients of the soil, both for the general growth of crops, and for that of certain organs in particular. Under this head, Liebig certainly ought to have mentioned the name of Sprengel, and although he has not done so, (concludes Dr. M.,) the history of science will amply repay the omission.

In the last chapter, which is headed "Rotation and Manures," Liebig opens the difficult question, why several crops of the same plant will not succeed on the same soil in an uninterrupted succession? and why, therefore, farmers resort to rotation? He thinks De Candolle's theory the best explanation of this, forgetting, it seems, that that coarse excrementitious theory has no better foundation than bad and injudicious experiments of Macaire Prinsep, the same man who misled De Candolle on other occasions also. Liebig, however, (says Dr. Mohl,) who has no idea that these experiments are fallacious and controverted by all succeeding ones of the same kind, works out this theory in its most minute details, and proves, *à priori*, that plants *must* have excrements. He divides the latter into two classes: those, namely, which have been absorbed by the roots, but not being adapted for the nourishment of plants, are again returned to the soil; and secondly, such substances as having been transformed in the vegetable organism by the process of nutrition, are the result of the formation of starch, woody fibre, gluten, &c. Excrementitious matter of the first class may serve as food for other plants; nay, they may even be essential for that purpose. Those of the second, however, can not be used by other plants in the formation of woody fibre, &c., until changed into humus, and decomposed into ammonia, carbonic acid, &c.

This theory, says Dr. Mohl, is not only destitute of all reasonable foundation, but is directly contradicted by the experience of rotation. There is no known evidence in proof of the existence of such excrementitious matter. It is true, Liebig says, that such *must* be the case, but then he adduces no proof except an ambiguous analogy with the animal kingdom, and forgetting, as he so often does, what he said—"that analogy is the parent of that unfortunate comparison between vegetable and animal functions, which places both on the bed of Procrustes, and is the cause of all error." "There is not," concludes Dr. Mohl, "the least necessity for assuming a secretion from roots. If substances formed by vital processes are of no further use to a plant, they are excreted in the form of gas through the leaves, or deposited in the form of secretion in the glands and other organs, or thrown off with decaying leaves." This theory is moreover at variance with the experience of what takes place in the shifting of crops. According to Liebig's views, the excrementitious matter of the second class above mentioned, would not only injure the plants whence it is derived, but could not be assimilated by any others before it is transformed into humus. But experience points quite another way, because the stubble of clover, lucerne, or saintfoin, which is unfit for the growth of those species, will at once produce excellent crops of other plants. If Liebig should attempt to meet this objection by saying that such excrementitious matter can not be assimilated by the plants whence they are derived, but may be used by others, he will upset his whole doctrine of vegetable nutrition, according to which not only all the organic compounds which remain behind after the formation of starch, sugar, &c., but even starch and sugar themselves, (and thus all the organic substances, of plants,) are absolutely deleterious to other plants. It is impossible, therefore, not to arrive at conclusions entirely opposite to those of Liebig, especially if we consider the phenomena of rotation at greater length. The barrenness of soil for the growth of one kind of plant, while it is still fertile for others, can only depend (says Dr. Mohl) on two causes. The first generation of plants may exhaust the soil of such substances as are indispensable to growth, so that the second generation will be starved—and this certainly takes place; but it can not be the main cause of the failure of crops, else manure would again render the soil suitable for the same crop, which is only the case to a slight extent. We must, therefore, assume that the first crops do communicate to the soil substances detrimental to the subsequent crops. These substances must be of an organic nature. It has been shown that these can not be excrementitious, and therefore it follows, that such deleterious substances must consist of organic compounds, derived from the roots which have accumulated and remained behind in the land. If, then, in a soil filled with the remains of roots, the same crop will only succeed after a lapse of years, while other crops will thrive luxuriantly, we may conclude, that the organic compounds of such roots will be absorbed by plants *previous* to their being decomposed into inorganic substances; and that, consequently, plants of a different kind will use them for food, although those of the same kind will be injured by them.

After having assigned the utility of rotation to the formation of humus, Dr. Liebig states his views of vegetable nutrition at the different periods of growth. He says, that a plant returns just so much carbon to the soil, as it has absorbed from it in the form of carbonic acid, produced by decomposing humus. This supply of carbon is sufficient for many plants at the first period of their growth, but it is not sufficient to supply some of their organs with the necessary maximum of food. But the object of agriculture is to gain the maximum of produce, and this, says Liebig, "stands in a direct ratio to the amount of food which has been given to a plant during the first period of its development," therefore all pains are to be taken to increase the amount of humus.

The short and the long of these rather vague assertions (says Dr. Mohl) is, apparently, that a crop will be the greater the more food a plant has received from the soil before its period of flowering. But this axiom, although true in the main, is somewhat contradicted by another, where it is stated that humus is useful to young plants by contributing to the increase of their organs of atmospheric nutrition; but it is not indispensable, and its excess may even be detrimental in the first stages of development. The food, namely, which a young plant receives from the air in the form of carbonic acid and ammonia, is restricted within certain limits—it can assimilate no more than the air contains. If, therefore, in the beginning of growth, the number of twigs, sprouts, or leaves, overpass this proportion in consequence of a superabundance of food obtained from the soil at that period, when the plant requires more food from the air for the completion of its development, and for its flowering and fruiting than the air can supply it with, blooming and fruiting will not take place. In many cases, such food will merely suffice for the development of leaves, stems, or branches.

Here Dr. Mohl complains of the strange ambiguity of this part of Liebig's theory. In one instance (says Mohl) the usual quantity of humus in the soil suffices merely to form leaves, and if we want an abundant harvest, we must get it by conveying a maximum of food from the soil. On the other hand, humus adds *nothing* to the crops, but, on the contrary, is noxious, by conveying too much food, for it causes the production of too much foliage, a sufficient supply of food for which can not be obtained from the air. Whence, then, does it arrive that a plant which has many leaves can *not* obtain from the air the food required for blooming, although it can do so if it has only a few leaves? It has been hitherto supposed that the reception of food from the air was in proportion to the number and size of its leaves; and this is plausible, but the contrary is not. When a plant standing in a moist and shaded situation grows too luxuriantly, and will not flower, the reason is not to be sought in a *deficiency* of food, but rather in its superabundance, and its influence on the too luxuriant development of its vegetative organs; for that will counteract the contraction of the axis and the metamorphosis of vegetative into floral organs.

Another statement, however, shows how Liebig arrived at the above conclusion. He says that, after the completion of its leaves, a plant does not require more carbonic acid from the soil; and that even perfect dryness of the soil will not impede the completion of its growth, if the plant continues to receive from dew and air the amount of moisture required for the process of assimilation; and that, in fine, it will derive in a hot summer its whole carbon exclusively from the atmosphere.

This assumption (says Dr. Mohl) is the result of an erroneous view of the fact, that in many plants—by no means in all—such organic substances are employed for the development of fruit, as, having been prepared by the leaves before the period of flowering, have been deposited in the stem or other organs, and are subsequently conveyed to the fruit. We know that some bulbous plants will fruit even when taken out of the soil. But general assertions, taken from special facts, can only lead to absurd conclusions. Let Professor Liebig cut plants in bloom above their roots, (*unnecessary*, he says, at that period,) and expose them to as much dew and rain as he likes, and see what will happen; or, as he is fond of experiments on a large scale, let him take the hay harvest for a test of this theory, which, after all, (concludes Dr. Mohl,) seems to be nothing more than a distorted and overdone *copy* of the doctrine of the development of plants given by Schwerz, in his treatise on Practical Agriculture, (Anleiitung zum Pract. Ackenbau, iii. 56.)

Besides the formation of humus, Liebig adduces another reason for the rotation of crops, viz., the relation which plants bear to the inorganic constituents of the soil. As every plant deprives the soil of certain ingredients, it thus makes it unfit for feeding similar plants, until by subsequent decomposition a fresh amount of such ingredients is again set free. To this proposition (says Dr. Mohl) no one will object; but it has long been known.

Having thus examined in detail the work of Dr. Liebig, Dr. Mohl concludes with the following general recapitulation. It appears upon the whole that Liebig has not availed himself of his chemical resources to clear up doubtful points in the nutrition of plants. Contrary to the spirit of a true investigator of Nature, he has not formed his conclusions on the detailed facts of vegetable phenomena, but on random observations, or vague operations on a large scale, destitute of all precision. His calculations are based on arbitrary assumptions. His book, therefore, far from being a consistent and well-digested theory, swarms with contradictions and false reasoning. He does not possess a knowledge of the most elementary doctrines of vegetable physiology. His assertion that physiologists have hitherto considered humus as the chief food of plants, is untrue. The assumption that plants live merely on inorganic substances, is by no means new, but has long been one of the controverted points of vegetable physiology. The assertion that all botanists have doubted the absorption of carbon by plants, by their decomposition of carbonic acid, is untrue. The assertion that plants neither absorb organic substances, nor assimilate them, rests on mere theoretical speculation, and is destitute of all proof. The statements as to the relation borne to the atmosphere by plants in the dark, is in direct opposition to every fact bearing on the subject. The assertion that the nitrogenous food of plants, and that which contains no nitrogen, are absorbed in certain proportions, is uncorroborated by the analysis of either the seed or the full-grown plant. The theory of the rotation of crops, is contrary to experience, and unsound in its details. The assertion that plants receive their food during summer from the atmosphere alone, is incorrect.

On the other hand, it can not be denied that Liebig's idea that plants derive their nitrogen from the ammonia of the atmosphere, is very happy and pregnant with results. It is also probable that the absorption of saline bases is in direct ratio to the power of saturation of the acids formed in plants. These two views are a real gain to science, and it may be expected that his work will also have the merit of exciting others to make correct experiments on the nutrition of plants. But he has endeavored to introduce into vegetable physiology a series of most erroneous notions, and his unbecoming outbreaks against other physiologists, have proved him to be very little acquainted with the subjects on which his book is written.

From the Southern Agriculturist.

ON THE CULTIVATION OF THE CUBA TOBACCO.

Sir:—The following communication on the Cuba tobacco, is from a gentleman who has had opportunities of becoming thoroughly acquainted with the mode of cultivating and curing the plant, as practised in Cuba, and where experience has enabled him to ascertain the modifications necessary to be adopted in transferring the culture to this country. It will be perceived that Gen. Hernandez estimates the value of the tobacco, *in leaf*, at 50 cents per pound—a higher price than it usually brings in our markets, where it is purchased for the purpose of being used as *wrappers* for cigars, the *fillings* of which are generally of American or Virginia tobacco. It is well known, however, that the best tobacco raised in the island is never exported, being reserved for the manufacture of the celebrated Havana cigars, after selling, as we have been informed, for more than a dollar a pound. As the tobacco raised and cured here, is considered by judges as no way inferior to the best Havana, it would probably sell for even a higher price than that estimated below, were it properly prepared for market, according to the Cuba method.

There can be no doubt that this valuable plant may be easily added to the enriching staples, and other numerous resources that form the *golden fleece* of the south. It is an advantage of this culture, that it affords an instance in which the manufacturing and agricultural interests are happily combined, as its highest profits can only be obtained by putting the tobacco into a wrought form, and making it into cigars.

The subjoined directions will be found more specific and minute, than any that have before been given to the public, and will therefore, I hope, prove an acceptable contribution to the pages of the Agriculturist.

With respect, your obedient servant,

W. H. SIMMONS.

Mala-Compra, 15*th April*, 1830.

DEAR SIR:—I have delayed this communication on the culture of Cuba tobacco longer than I ought, but as you are acquainted with the multiplicity of engagements that have constantly occupied my attention, I trust that you will excuse me.

The first thing to be considered in this, as in every other culture, is the soil, which for this kind of tobacco ought to be of a rich sandy loam, neither too high nor too low; that is, ground capable of retaining moisture. The more level, the better, and if possible, well protected by margins. The next should be the selection of a spot of ground to make the necessary beds.

It would be preferable to make these on land newly cleared, or at all events, when the land has not been seeded with grass; for grass seeds springing up together with the tobacco, would injure it materially, as the grass can not be removed without disturbing the tobacco plants. In preparing the ground for the nurseries, break it up properly, grub up all the small stumps, dig out the roots, and carefully remove them with the hand; this being done, make the beds from three to four inches high, of a reasonable length, and from three to three and a half feet broad, so as to enable the hand, at arm's length, to weed out the tender young plants with the fingers from both sides of the bed, and keep them perfectly clean.

The months of December and January are the most proper for sowing the seed in Florida. Some persons speak of planting it as early as the month of November; I am, however, of opinion, that about the latter part of December is the best time to sow tobacco seed; any sooner would expose the plants to suffer from the inclemency of the most severe part of our winter season. Before the seed is sown, take some dry trash and burn it off upon the nursery beds, to destroy insects and grass seeds; then take one ounce of tobacco seed and mix it with about a quart of dry ashes, so as to separate the seed as much as possible, and sow it broadcast. After the seed has been thus sown, the surface of the bed ought to be raked over slightly, and trodden upon by the foot, carrying the whole weight of the body with it, that the ground may at once adhere closely to the seed, and then water it. Should the nursery-beds apparently become dry from blighting winds or other causes, watering will be absolutely necessary; for the ground ought to be kept in a moist state from the time the seed is planted, until the young plants are large enough to be set out.

The nurseries being made, proceed to prepare the land where the tobacco is to be set out. If the land is newly cleared (and new land is probably more favorable to the production of this plant than it is to that of any other, both as respects quality and quantity), remove as many of the stumps and roots as possible, and dig up the ground in such a manner, as to render the surface perfectly loose; then level the ground, and in this state leave it until the nursery-plants have acquired about one half the growth necessary to admit of their being set out. Then break up the ground a second time in the same manner as at first, as in this way all the small fibres of roots and their rooted parts will be more or less separated, and thus obviate much of that degree of sponginess so common to new land, and which is in a great measure the cause of new land seldom producing well the first year, as the soil does not lay close enough to the roots of the plants growing in it; so that a shower of rain produces no other effect than that of removing the earth still more from them. Should the land be such as to admit of being worked with the plow, it ought certainly to be preferred to the common hoe. The plow, however, should be excluded after the plants are set out.

The ground having been prepared and properly levelled off, and the plants sufficiently grown to be taken up, say of the size of good cabbage plants, take advantage of the first wet or cloudy weather to commence setting them out. This should be done with great care, and the plants put single at equal distances; that is, about three feet north and south, and two and a half or two and three fourths feet east and west. They are placed thus close to each other, to prevent the leaves growing too large. The direction of the rows, however, should alter according to the situation of the land; where it has any inclination, the widest space should run across it, as the beds will have to be made, so as to prevent the soil from being washed from the roots by rain, when bedded; but, where the land is rather level, the three-feet rows should be north and south, so as to give to the plants a more full effect on them by passing across the beds, than by crossing them in an oblique direction. To set the plants out regularly, take a task line of 105 feet in length, with a pointed stick three feet long attached to each end of it; then insert a small piece of rag or something else through the line, at the distance of two feet and three fourths from each other; place it north and south, (or as the land may require,) at full length, and then set a plant at every division, carefully keeping the bud of the plant above the surface of the ground. Then remove the line three feet from the first row, and so on until the planting is completed. Care ought to be taken to prevent the stretching of the line from misplacing the plants. In this way the plants can be easily set out, and a proper direction given to them both ways. In taking the plants up from the nursery, the ground should be first loosened with a flat piece of wood, or iron, about an inch broad; then carefully holding the leaves closed toward each other, between the fingers, draw them up, and place them in a basket or some other convenient thing, to receive them for planting. After taking up those which can be planted during the day, water the nursery that the earth may again adhere to the remaining ones. The evening is the best time for setting out the plants, but where a large field has to be cultivated, it will be well to plant both morning and evening. The plants set out in the morning, unless in rainy or cloudy weather, should be covered immediately, and the same should be done with those planted the evening previous, should the day open with a clear sunshine—the palmetto leaf answers this purpose very well. There should be water convenient to the plants, so as to have them watered morning and evening, but more particularly in the evening, until they have taken root.[*] They should also be closely examined when watered, so as to replace such plants as happen to die, that the ground may be properly occupied, and that all the plants may ripen as nearly together as possible.

From the time the plants are set out, the earth round them should be occasionally stirred, both with the hand and hoe. At first hoe flat, but as soon as the leaves assume a growing disposition, begin gradually to draw a slight bed toward the plant. The plants must be closely examined, even while in the nursery, to destroy the numerous worms that feed upon them—some, by cutting the stalk and gnawing the leaves when first set out; these resemble the grub-worm, and are to be found near the injured plant under ground; others which come from the eggs deposited on the plant by the butterfly, and feed on the leaf, grow to a very large size, and look very ugly, and are commonly called the tobacco-worm. There is also a small worm which attacks the bud of the plant, and which is sure destruction to its further growth; and some again, though less destructive, are to be seen within the two coats of the leaf, feeding as it were on its juices alone. The worming should be strictly attended to every morning and evening, until the plants are pretty well grown, when every other day will be sufficient. The most proper persons for worming, are either boys or girls of from ten to fourteen years of age. They should be made to come to the tobacco-ground early in the morning, and be led by inducements, (such as giving a trifling reward to those who will bring the most worms,) to worm it properly. Grown persons would find it rather too tedious to stoop to examine the under part of every leaf, and seek the worm under ground; nor would they be so much alive to the value of a spoonful of sugar, or other light reward. Besides, where the former would make this search a matter of profit and pleasure, it would to the latter prove only a tedious and irksome occupation. Here I will observe, that it is for similar reasons that the culture of the Cuba tobacco-plant more properly belongs to a white population, for there are few plants requiring more attention and tender treatment than it does. Indeed it will present a sorry appearance, unless the eye of its legitimate proprietor is constantly watching over it.

When the plants have acquired from twelve to fourteen good leaves, and are about knee high, it may be well to begin to top them, by nipping off the bud with the aid of the finger and thumb nail,[*] taking care not to destroy the small leaves immediately near the bud; for if the land is good and the season favorable, those very small top leaves will in a short time be nearly as large, and ripen quite as soon as the lower ones, whereby two or four more leaves may be saved; thus obtaining from sixteen to eighteen leaves in the place of twelve or fourteen, which is the general average. As the topping of the tobacco-plant is all essential in order to promote the growth, and to equalize the ripening of the leaves, I would observe that this operation should at all events commence the instant that the bud of the plant shows a disposition to go to seed, and be immediately followed by removing the suckers, which it will now put out at every leaf. Indeed the suckers should be removed from the plant as often as they appear. The tobacco-plant ought never to be cut before it comes to full maturity, which is known by the leaves becoming mottled, coarse, and of a thick texture, and gummy to the touch, at which time the end of the leaf, by being doubled, will break short, which it will not do to the same extent when green. It ought not to be cut in wet weather, when the leaves lose their natural gummy substance, so necessary to be preserved.—About this period the cultivator is apt to be rendered anxious by the fear of allowing the plants to remain in the field longer than necessary, until experience removes these apprehensions; he should be on his guard, however, not to destroy the quality of his tobacco, by cutting it too soon. When the cutting is to commence, there should be procured a quantity of forked stakes, set upright, with a pole or rider setting on each fork, ready to support the tobacco, and to keep it from the ground. The plant is then cut obliquely even with the surface of the ground, and the person thus employed should strike the lower end of the stalk two or three times with the blunt side of his knife, so as to cause as much of the sand or soil to fall from it as possible; then tying two stalks together, they are gently placed across the riders or poles prepared to receive them. In this state they are allowed to remain in the sun or open air, until the leaves have somewhat wilted, whereby they will not be liable to the injury which they would otherwise receive if they came suddenly in contact with other bodies when fresh cut.—Then place as many plants on each pole or rider as may be conveniently carried, and take them in the drying-house, where the tobacco is strung off upon the frames prepared for it, leaving a small space between the two plants, that air may circulate freely among them, and promote their drying. As the drying advances, the stalks are brought closer to each other, so as to make room for thos which yet remain to be housed.

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[*] It is hence generally necessary that wells should be sunk at convenient distances through the field.

[*] Washing the hands after this in water is necessary, as the acrid juices of the plants, otherwise, soon produce a soreness of the fingers.

In drying the tobacco, all damp air should be excluded, nor ought the drying of it to be precipitated by the admission of high drying winds. This process is to be promoted in the most moderate manner, except in the rainy season, when the sooner the drying is effected the better; for it is a plant easily affected by the changes of the weather, after the drying commences. It is then liable to mildew in damp weather, which is, when the leaf changes from its original color to a pale-yellow cast, and from this, by parts, to an even brown. When the middle stem is perfectly dry, it can be taken down, and the leaves stripped from the stalk and put in bulk to sweat, that is, to make tobacco of them; for before this process, when a concentration of its better qualities takes place, the leaves are always liable to be affected by the weather, and can not well be considered as being anything else than common dry leaves, partaking of the nature of tobacco, but not actually tobacco. The leaves are to be stripped from the stalks in damp or cloudy weather, when they are more easily handled, and the separation of the different qualities rendered also more easy. The good leaves are at this time kept by themselves for *wrappers*, or *caps*, and the most defective ones for *fillings*, or *tripa*. When the tobacco is put in bulk, the stems of the leaves should all be kept in one direction, to facilitate the tying of them in hanks; afterward make the bulk two or three feet high, and of a proportionate circumference. To guard against the leaves becoming overheated, and to equalize the fermentation or sweating, after the first twenty-four hours, place the outside leaves in the centre, and those of the centre to the outside of the bulk. By doing this once or twice, and taking care to cover the bulk either with sheets or blankets, so as to exclude all air from it, and leaving it in this state for about forty days, it acquires an odor strong enough to produce sneezing, and the other qualities of cured tobacco. The process of curing may then be considered as completed. Then take some of the most injured leaves, but of the best quality, and in proportion to the quantity of tobacco made, and place them in clear water, there let them remain until they rot, which they will do in about eight days; then break open your bulks, spread the tobacco with the stems in one direction, and dampen them with this water in a gentle manner, that it may not soak through the leaf; for in this case, the leaf would rot.* Then tie them in hanks of from twenty-five to thirty leaves; this being done, spread the hanks in the tobacco-house for about twelve hours, to air them, that the dampness may be removed, and afterward pack them in casks or barrels, and head them tight, until you wish to manufacture them. The object of dampening the tobacco with this water, is to give it elasticity to promote its burning free, to increase its fragrance, to give it an aromatic smell, and to keep it always soft. This is the great secret of curing tobacco for cigars properly, and for which we are indebted to the people of Cuba, who certainly understand the mode of curing this kind of tobacco better than any other people. It is to them a source of great wealth, and may be made equally so to us. We can have here three cuttings from the original plant; the last cutting will be of rather a weak quality, but which, nevertheless, will be agreeable to those who confine their smoking to weak tobacco.

In ratooning the plant, only one sprout ought to be allowed to grow, and this from those most deeply rooted—all other sprouts ought to be destroyed.

The houses necessary for the curing of tobacco ought to be roomy, with a passage-way running through the centre, from one extremity of the building to the other, and pierced on both sides with sufficient number of doors and windows, to make them perfectly airy.

In addition to what I have said respecting the mode of cultivating and treating the tobacco-plant, I have further to state, that once the plant is allowed to be checked in its growth, it never again recovers it. That in promoting the drying of the leaf, fire should not be resorted to, because the smoke would impart to it a flavor that would injure that of the tobacco itself.

In order to obtain vigorous plants, the seed ought to be procured from the original stalk, and not from the ratoons, by allowing some of them to go to seed for that express purpose. In Cuba, the seed is most generally saved from the ratoon plants, but we should consider that that climate and soil are probably more favorable to the production of this plant than ours, and consequently, we ought to confide in the best seed, which is had from the original stalk.

All plants have their peculiar empire; nevertheless we should not be deterred from planting Cuba tobacco here; for even should we be compelled to import the seed every third year, which would be as often as necessary, it would still prove a profitable culture. Taking 600 lbs., which is the average product per acre, it would yield, if well cured, at 50 cents per lb., $300 in the leaf.

The following exhibits the profit to be derived from it when manufactured into cigars:—

600 lbs., allowing 8 lbs. to the 1000, would produce 75,000 cigars, which, at $10 per thousand . . .		$750 00
Cost of the leaf	$300 00	
Worth of manufacture at $2 50 per thousand . . .	187 50—	487 50
Difference in favor of the manufacturer		$262 50

This amount being the profits of the manufacturer, alone, the profit to him who would combine both pursuits would be more than doubled.

As to the quantity of land which can be cultivated to the hand, there is some difference in the practice of planters; however, I think that I am within the usual calculation in saying, that an acre and a half would not exceed the quantity that an able hand can easily cultivate and manage properly.

I am, with respect, your obedient servant,

Joseph M. Hernandez.

N. B.—I have omitted to state the cost of the cigar-boxes, which of course has also to be deducted. This would vary according to the facility of obtaining materials, but probably would not exceed 25 cents per box.

To Dr. Wm. H. Simmons.

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* Sponge is used in Cuba for this delicate operation.

FOREIGN AGRICULTURAL NEWS.

By the steampacket Britannia, we have our files of European journals up to the 19th October.

Markets. *Ashes* were firm and in good demand. *Cotton* had advanced ¼d. per lb., and a very large business had been done in it previous to the 16th, nearly 100,000 bales having changed hands in a single week; but on the arrival of the Caledonia at Liverpool on the 17th, bringing more flattering advices of the state of the present crop, the market became flat, and the article receded ⅛d., so that the real rise since our last, as the market now stands, is only ⅛d. per lb. Stock on hand at Liverpool, 732,000 bales; at Havre, 96,000 bales. *Beef* was taken to a fair extent; the stock on hand small. *Pork* was held firm, with rather short supplies. *Lard* had slightly receded. *Cheese* plenty and rather dull. It was thought the better qualities would be sought for on the approach of winter. *Naval Stores* and *Tobacco* in moderate demand. *Butter* has advanced a trifle. *Flour* had declined. *Rice* in fair request.

Business generally continued very good, and the manufactories were in full operation. News had arrived from China of the full ratification of the British treaty; and it was anticipated that there would be an increased consumption of English goods in the Celestial Empire.

Money still continued abundant, and to be had at low rates. The bullion was increasing in the bank of England.

American Stocks were improving, and the holders seem unwilling to sell at present prices.

Canada Flour.—The new Canada Corn-Bill is passed, and flour from the British Provinces is admitted at 7½d. per barrel, and wheat at 1s. per quarter; equal to about 15 cents per barrel, and 3 cents per bushel of our money. We are of opinion that this new bill will have a slightly-favorable effect upon our own market.

The Harvest in England had proved a good one, and things generally in Europe seemed to wear a favorable aspect. We trust they may long continue so.

Great Sale of Stock.—At the late Exmoor sale of stock, £6,000 ($30,000) worth was knocked off by Mr. Moggridge the auctioneer. The quantity of eatables and drinkables provided for the dinner, seemed to be in proportion to the sales; two fat bullocks, and 4 hogsheads of beer, being among the items on this occasion.

Liverpool Mail.—*Good Effects of Draining.*—At the late annual meeting of the Liverpool Agricultural Society, the President, Lord Stanley, said that he would state one instance of the practical returns which might be expected from thorough, scientific draining. In 1841 his father was about to enclose in the park at Knowsly a tract of about 80 acres. Of this 80 acres, about 20 were strong clay land, with a very retentive sub-soil, and the remaining 60 he remembered from his boyhood as the favorite haunt of snipes and wild ducks, and never saw there anything else. In the course of the first year the 60 acres maintained, and maintained very poorly during the summer, six horses; and on the 20 acres there was a very small crop of very poor hay. It was impossible for land to be in a poorer condition; and they would agree with him when he told them, that in breaking it up, they had some two or three times to dig the plow-horses out of the bog. In 1841 the whole of this land was thoroughly sub-soiled and drained, and in 1842, what was not worth 10s an acre the year before, was in turneps, and on that land they fed off in five months, and fattened for the butcher, 80 beasts and 300 sheep, and afterward carted into the farm-yard 350 tons of turneps. In the present year they had a very fair crop of barley and oats, which his friend Mr. Henry would be very glad to show to any gentleman who felt any curiosity on the subject. Now he did not hesitate to say that that land was, at that moment, worth 30s. an acre. The outlay upon it for pulling up old fences, thorough draining, tiling, and breaking it up, amounted just to 7*l.* 10s. per acre, just giving 20s. for every 150s. of outlay, and giving to the landlord a permanent interest of 14 per cent. on the money laid out on that unpromising ground. It happened that in the same year they took into their own hands land which had been abandoned by the tenant as perfectly worthless. It was a large field of twenty-two acres of very poor sandy soil. It was drained at an expense of 2*l.* per statute acre, and in the first year they fed off on that land 120 sheep, the remaining part of the turneps being carted to the farm-yard; and he ventured to say, that at the expense of 2*l.* per acre, the land was increased in value 10s. per acre to the landlord, and 10s. to the tenant.

Fences.—Lord Stanley said he had a word or two to offer with regard to fences and the laying out of farms in this country. He was no advocate for the destruction of hedges, or the destruction of hedge-row timber. He was well aware that in a country so flat and exposed as this, it was not ornament only, but it was protection that was afforded by hedge-row timber. He was aware that the size of fields must bear some proportion to the size of the farm, and that the size of the farm must be proportioned to the capital of the farmer who occupied it; and with a conviction of the superior cultivation and economy of large farms, he would make considerable sacrifice rather than remove from any farm, too small though he might think it, an industrious tenant who was exerting himself to the best of his means and abilities to cultivate it to the best advantage. But though he was not an advocate for the destruction of the hedge-row timber, some bounds must be set to the timber, and still more to the fences. He had observed in some parts of this country fields of two acres, one acre, and even three quarters of an acre, and the number of fences this required could lead to no profit, but did much mischief. The other day he called for a particular return of the quantity of land gained in a district of 291 acres, by the mere removal of the fences, and laying the fields properly together, and what did they suppose it amounted to? Why to 22 statute acres, or nearly one seventh of the whole surface of the soil.

Sub-soil Plowing.—The Committee on Farms and Crops make the following observations on the beneficial effects of sub-soiling:—Sub-soiling of land, after under-draining, we consider has been of great service in those instances in which we have seen it adopted. If there be any sub-soil on which it is the least likely to be beneficial, we think it is the very stiff clays. The sub-soil plow is generally worked by four or five horses, preceded by a common plow with two horses, and loosens the soil about sixteen inches deep. One of the claimants has had a sub-soil plow constructed, which he can work with two horses, and which must be considered a great desideratum in sub-soil plowing. We have just seen a new description of sub-soil plow, at Mr. Neilson's, of Halewood, and which is applicable for working between the turnep drills. It will loosen the soil twelve inches deep, is drawn by three horses, and is likely to prove a useful implement.

Pharmaceutical Journal.—*Sagacity of Bees.*—A few pounds of honey had been taken from a hive (about six miles from London) and placed in a closet, under lock and key. The windows of the room having been left open, the bees obtained admission, and entering the closet under the door, removed the whole of the honey. The cells of wax were left entire, and the honey was conveyed to the central division of the hive, where it was safely deposited in the course of the day. It is evident that spies must have been employed to observe where the honey was placed, and that as soon as the information was communicated to the hive, the swarm took this vigorous measure for the recovery of the stolen property. It is remarkable that they should have succeeded so completely and in so short a time, since the closet was entirely dark, and they could only enter by a crevice under the door.

Gardeners' Chronicle.—*Flowering the Paulovnia Imperialis.*—The flowers of this tree are deliciously sweet, and are produced freely on very young plants, if forced for that purpose. The conditions to be attended to are—to keep the plants under-potted—to force them slowly in a cool stove, early vinery, or forcing-house, beginning early in the spring; by midsummer they will have finished their growth, have begun to show their flower-buds, and to cast their leaves; they will then require less water, and in six weeks or two months the flowers will begin to expand, and the plants, of course, will be brought into the conservatory, where they will take up little room, as they may be set anywhere, only leaving their heads of flowers free above other plants which surround them. Now, we can easily see that with a good stock of these plants, we may have some of them in flower for the conservatory all the winter and most of the spring months, by introducing a few plants into a forcing-house once a month, from January to May, and if at first the succession comes in faster than we wish, the plants may be set out-of-doors in a cool frame, to keep them back, as under this culture, the young wood will become perfectly ripened, and the tree rendered much more hardy. But, as Mr. Brewster, Mrs. Wray's successful gardener remarks, "If you allow these plants large pot-room, you are only laying the foundation for that great superstructure of wood and foliage which can only be ripened in a more favorable climate than ours; and unless you get the wood well ripened, you must be content with large leaves only." Last year I kept one of our plants of Paulovnia in the stove until it was quite ripe, then inured it by degrees to the open air, and by the beginning of July had it planted out in an exposed situation in the pleasure-ground, giving it no protection in winter; early in May it was in leaf, and about four feet high; after a few weeks a strong sucker came up from the collar; I cut down the old plant to this sucker early in June last, and now the sucker has formed a little tree about 10 feet high, with immensely large rhubarb-like leaves. Might not the Catalpa syringæfolia be treated like paulovnia for the sake of its large, trumpet-like flowers, which are produced in abundance in the neighborhood of London and farther south, but are seldom to be met with in colder parts of the country?

Blisters in the Leaves of Peach-Trees.—A wash of sulphur, soot, and lime, applied to peach-trees in spring, does not prevent the leaves from blistering. This disease is occasioned by cold. Ammoniacal liquor, diluted with 10 or 12 parts of water, will kill the aphis which infests peach, nectarine, and other fruit-trees. The ants do not feed on these insects until the latter are either dead or sickly, and then they carry them off the tree. It is understood that it is the sweet exudation from the aphides which tempts the ants.

Budding Rhododendrons.—Mr. Beaton, in his "Calendar of Operations" for Sept. 30, mentions the success of an experiment in budding rhododendrons in the open air, and also that a young English lady has outstripped the very best of gardeners in this operation; but I beg to inform him that it has been practised here with great success for many years, and we have now standards with large fine heads from buds; also a quantity of buds which have been inserted this season, that have taken well. It will, without doubt, be a great acquisition to gardening, as flower-buds are generally formed on the first season's growth.—*H. G. Y., Dorking.*

New and superior System of Potting Plants.—Take a 16 or 12-sized pot, place three inches of bottom drainage, and fill up with pieces of peat from one to four inches square; fill the interstices with the fibrous siftings of peat, and pieces of crocks, till the pot is quite full; then plant a seedling or struck cutting of heath of similar habit, give very little water till the little plant shoots freely; and in this treatment is contained the only secret in growing fine specimens.

Editor's Table.

Familiar Letters on Chemistry, and its Relation to Commerce, Physiology, and Agriculture; by Justus Leibig, edited by John Gardner, M. D., 180 pp. 18 mo.; price, bound, 25 cts., stitched in paper covers, 12½ cts.: D. Appleton & Co., 200 Broadway. The same, 53 pp. octavo, J. Winchester, New World press, 30 Ann st.; price 6¼ cents. The same, octavo, in a uniform edition with the other works of Leibig, James M. Campbell, Philadelphia; Saxton & Miles, 205 Broadway, N. Y.; price 12½ cts. The announcement of three editions of Leibig's Letters, as above, is enough to show the immense popularity of his works. What we have found time to read of his Letters, we like much; they abound with valuable information, and should be faithfully perused by all who are desirous of information upon the subjects of which they treat.

Hovey & Co.'s Descriptive Catalogue of Roses, cultivated and for sale at the Cambridge Nurseries, Cambridge, near Boston, Mass., for the autumn of 1843 and spring of 1844. The above list is very extensive, containing names, description, prices, &c., of the greatest favorite of flowers, &c., and can be had upon application to Messrs. Hovey & Co., of Merchants' Row, Boston.

Applied Chemistry in Manufactures, Arts, and Domestic Economy, edited by E. A. Parnell, with engravings on wood, in monthly Nos., octavo; price 25 cts.

The Encyclopædia of Chemistry, Theoretical and Practical; presenting a complete and extended view of the present state of chemical science; by James C. Booth, and Martin H. Boyle, with numerous engravings, in monthly Nos., octavo; price 25 cents. Both of the above works are published by Carey & Hart, of Philadelphia, and for sale by Saxton & Miles of this city. The editors are professors and lecturers on chemistry, and we have no doubt will give the public able and satisfactory works on this important science, and such as may safely be referred to as containing the latest and best information.

The Silk Question Settled, being a Report of the proceedings of the late Silk Convention held in this city, and the documents submitted to it, is in press, and will soon be out, published by Saxton & Miles, 205 Broadway, in a pamphlet of about 120 pages, as an American Agriculturist extra, and uniform with it. We shall speak of this able report more at length hereafter.

A Silk Manual is also about to be published under the auspices of the American Institute; it being a prize essay.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, NOVEMBER 13, 1843.

ASHES, Pots,	per 100 lbs.	$4 56	to	$4 62
Pearls,	do.	5 25	"	5 38
BACON SIDES, Smoked,	per lb.	4½	"	5½
In pickle	do.	5	"	5½
BALE ROPE	do.	6	"	9
BARK, Quercitron	per ton	23 00	"	24 50
BARLEY	per bush.	52	"	56
BEANS, White	do.	1 12½	"	1 25
BEEF, Mess	per bbl.	6 00	"	7 00
Prime	do.	4 00	"	5 00
Smoked	per lb.	7	"	7½
Rounds, in pickle	do.	4	"	5½
BEESWAX, Am. Yellow	do.	28	"	30
BOLT ROPE	do.	12	"	13
BRISTLES, American	do.	25	"	65
BUTTER, Table	do.	12	"	15
Shipping	do.	6	"	10
CANDLES, Mould, Tallow	do.	9	"	12
Sperm	do.	32	"	38
Stearic	do.	20	"	25
CHEESE	do.	4	"	7
CIDER BRANDY, Eastern	per gal.	35	"	40
Western	do.	28	"	35
CLOVER SEED	per lb.	8	"	9
COAL, Anthracite	2000 lbs.	4 50	"	5 50
Sidney and Pictou	per chal.	8 00	"	8 50
CORDAGE, American	per lb.	11	"	12
CORN, Northern	per bush.	56	"	58
Southern	do.	52	"	54
COTTON	per lb.	6	"	11
COTTON BAGGING, Amer. hemp	per yard.	16	"	18
American Flax	do.	15	"	16
FEATHERS	per lb.	27	"	31
FLAX, American	do.	8	"	8½
FLAX SEED, rough	per 7 bush.	8 75	"	9 00
clean	do.	— —	"	— —
FLOUR, Northern and Western	per bbl.	4 62	"	4 75
Fancy	do.	5 50	"	5 62½
Southern	per bbl.	4 50	"	4 75
Richmond City Mills	do.	5 50	"	5 62
Rye	do.	3 00	"	3 12
HAMS, Smoked	per lb.	5	"	7½
Pickled	do.	4	"	5
HAY	per 100 lbs.	40	"	44
HIDES, Dry Southern	per lb.	9	"	11
HEMP, Russia, clean	per ton.	185 00	"	190 00
American, water-rotted	do.	140 00	"	180 00
do dew-rotted	do.	90 00	"	140 00
HOPS	per lb.	6	"	8
HORNS	per 100	1 25	"	5 00
LARD	per lb.	5½	"	7
LEAD	do.	3½	"	4
Sheet and bar	do.	4	"	4½
MEAL, Corn	per bbl.	2 75	"	3 00
Corn	per hhd.	12 50	"	13 00
MOLASSES, New Orleans	per gal.	24	"	27
MUSTARD, American	per lb.	16	"	31
OATS, Northern	per bush.	30	"	32
Southern	do.	25	"	26
OIL, Linseed, American	per gal.	75	"	80
Castor	do.	90	"	1 00
Lard	do.	55	"	65
OIL CAKE	per 100 lbs.	1 00	"	— —
PEAS, Field.	per bush.	1 25	"	— —
PITCH	per bbl.	1 12½	"	1 37
PLASTER OF PARIS	per ton.	2 00	"	2 25
Ground, in bbls	per cwt.	50	"	— —
PORK, Mess	per bbl.	10 00	"	11 00
Prime	do.	9 25	"	10 12
RICE	per 100 lbs.	2 75	"	3 12
ROSIN	per bbl.	75	"	1 00
RYE	per bush.	69	"	70
SALT	per sack	1 35	"	1 50
SHOULDERS, Smoked	per lb.	3	"	4½
Pickled	do.	3	"	4
SPIRITS TURPENTINE, Southern	per gal.	38	"	40
SUGAR, New Orleans	per lb.	6	"	7½
SUMAC, American	per ton	25 00	"	27 50
TALLOW	per lb.	7	"	7½
TAR	per bbl.	1 25	"	1 50
TIMOTHY SEED	per 7 bush.	11 00	"	13 00
TOBACCO	per lb.	3	"	6½
TURPENTINE	per bbl.	2 50	"	2 62
WHEAT, Western	per bush.	95	"	1 00
Southern	do.	85	"	95
WHISKEY, American	per gal.	23	"	25
WOOL, Saxony	per lb.	35	"	50
Merino	do.	30	"	35
Half-blood	do.	25	"	27
Common	do.	18	"	22

New York Cattle Market—November 13.

At market, 1,050 beef Cattle, (250 southern), 25 Cows and Calves, and 6,000 Sheep and Lambs.

PRICES.—*Beef Cattle* do not show any great change except for the best, which are in demand. We quote ordinary to prime retailing $4 *a* $4 50 to 5 *a* $5 25. 200 unsold, and 40 taken to Bermuda.

Cows and Calves.—All taken at $18 *a* $28.

Sheep and Lambs.—Sales of the former at $1 87½ *a* $3 25, as in quality, and of Lambs at 87½ *a* $2 12½, which is a decline.—500 unsold.

REMARKS.—*Ashes*, a limited supply, and sales brisk with an upward tendency. *Cotton*, in this great staple, the American market is at present totally independent of that of Great Britain; we know the precise amount there on hand, and the probable quantity of consumption for the ensuing year, and with the information of the state of the crop at home, can calculate better even than those abroad, whether there will be a rise or fall. The latest accounts from the south are gloomy enough. Owing to the continued heavy rains, large quantities of a luxuriant growth have completely disappointed expectation, by rotting in the boll; and it is confidently calculated now, that the present crop can not reach over 1,800,000 bales. This diminution of production, in conjunction with the increased consumption, the abundance of money, and the general improvement in other things, has given us a very active market the past week, at an advance of ¼ to ⅜, and some assert of even ½ cent per lb. of a few prime lots, and the probability is, that it must go higher rather than lower, unless a favorable change has taken place in the weather at the south ere this. Exports since 1st September last, 28,925 bales; same time last year, 78,159; same time year before, 65,661 *Flour* and *Meal* are abundant, and large quantities have gone into store. About 1,300,000 brls. of Flour have been received this season down the Hudson. *Grain*. Wheat is in good demand, and rather wanted. Rye and Oats are selling fairly. Corn, somewhat scarce and improving. *Hay*, little afloat. *Molasses*, steady. *Naval Stores*, without change. *Provisions* tolerably active. *Lard*, especially, in good request. Dressed Hogs by the quantity are taken by the packers at $5 per hundred. At Cincinnati they command from $2.37 to $2.50. *Rice*, little doing. *Seeds*, considering the season, are in good demand. *Sugar*, in moderate request. The crop is represented as quite short in Louisiana. *Tobacco* continues quiet; if anything, prices are in favor of the seller. *Wool*, the foreign stock on hand here is light, and a good business is now doing in American qualities.

Stocks continue to advance. United States sixes, payable in 1862, are now 18 to 19 per cent. above par. Nine months ago they were below par.

Money as abundant as ever, although the banks are asking more for it.

The Weather is cold for the season, with a superabundance of rain. Farther north the snows have been frequent and heavy, and came on so early as to considerably injure the late root crops in harvesting, and in some instances destroy those still left in the ground.

TO CORRESPONDENTS.—C. Baker, R. B. C., and Wm. Partridge, will find place in our next. Mr. Grove's letter was deferred till the present No., we wishing to get official information as to the census of sheep.

CHARLES STARR, Jr.,

MENDHAM, MORRIS COUNTY, NEW JERSEY,

Is prepared to execute all orders for thorough-bred Berkshire Pigs, from the imported boar Hagbourn, and a superior Boar of Windsor-castle family, and fifteen choice sows, lately procured from A. B. Allen, of Buffalo, New York.

Pigs from this superior stock, from 2 to 3 months old, will be delivered, well caged, on shipboard, at New York, for $25 to $30 per pair. Feed furnished, when desired, at $3 per barrel.

Persons desiring either pigs or full-grown animals, can be supplied with all the advantages of Mr. Allen's stock at Buffalo, without incurring the risk and cost of canal transportation—the advertiser's residence being but half a day's journey from New York.

Woburn pigs of a superior quality also for sale, caged and delivered as above, for $20 per pair.

BLACK GALLOWAY CATTLE.

A pure-bred imported cow, and a bull of the Galloway or Kyloe breed of Scotch Highland cattle, are for sale in this vicinity. These animals are very fine of their kind, and were chosen from one of the most celebrated breeders of this stock in Scotland. The cow took several prizes at the agricultural shows before being shipped to this country, and gives a superior quality of milk. The bull is quite equal to the cow, and they will be sold at a reasonable price.

Apply, post paid, to the Editor of this paper.

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The New Descriptive Catalogue, not only of Fruit, but also of Ornamental Trees, Shrubs, and Plants, cultivated and for sale at this ancient and celebrated Nursery (known as Prince's, and by the above title for nearly fifty years), with directions for their culture, may be had *gratis* on application to the new proprietors by mail, post paid. The collection at this establishment is unrivalled, and prices generally very much reduced: and the proprietors flatter themselves that the catalogue will be found to surpass in extent of information and usefulness, anything of the kind ever before presented to the public, and to be worthy of a permanent place in the library of the horticulturist. Orders will be promptly executed.

WINTER & Co., Proprietors.

Flushing, Oct. 24th, 1843.

A STOCK MAN WANTED TO GO SOUTH.

A planter, in the state of Georgia, wishes to engage a faithful competent man to take charge of his stock. If he be married, and his wife be a good dairywoman, she will also find employment. The situation is in the interior of the country, and *quite healthy*. None need apply if above middle age, or who have not had some experience in their business in this country, and can bring the best of references.

Address the Editor of this paper.

BUSINESS AGENCY.

The Subscriber will attend promptly to the execution of all orders for the purchase of stock, agricultural implements, or merchandise of any kind; also the negotiation of loans, sales of lands, payment of taxes, &c. He has been more or less engaged in mercantile pursuits in this city for ten years, and has an extensive acquaintance with moneyed men, and a thorough knowledge of business in general. Cash or produce must invariably be in hand, before orders for purchases can be executed.

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Among the many publications of more than doubtful utility, with which our presses groan, it is pleasant to offer to the public one which, while it can not injure the mental and moral powers, is capable of improving our health and prolonging our days. It is now about ten years since this work was first published, since which time it has passed through many large editions, and the astonishing number *of one hundred thousand* copies has been sold in the southern and western states, and the demand is increasing.

It has just been revised and corrected, containing 900 pages, and executed in superior style. People may be disposed to smile when we tell them that they can save money by purchasing this book, but we think we can satisfy them that such is the fact. In every family more or less is paid yearly for doctor's bills. A child is taken with a fever, or some other complaint, and from ignorance nothing is or can be done effectually to check it. The physician is called, and a large bill is contracted; whereas, had GUNN'S DOMESTIC MEDICINE been on hand, a remedy could easily have been found which would have checked the disease in its first stage, and not only have saved the purse, but perhaps the life.

American Agriculturist Almanac for 1844.

This work comprises 64 pages, double columns octavo, with numerous wood cuts, price $6 per hundred, 12½ cents each. In the contents will be found—Agricultural Statistics of the United States—Aspects and Nodes—Astronomical Calendars for Montreal, Boston, New York, Philadelphia, Charleston, and New Orleans—Characters and Names of the Planets, &c.—Farmers' Northern Calendars, with particular directions for the management of the Farm, Cattle, Fruit and Flower Garden, &c.—Southern Calendars for the Planter and Farmer, with explicit directions for the culture and harvesting of Cotton, Rice, Tobacco, &c., &c.

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Volume 1 of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway, New York.

STOCK FOR SALE.

R. H. Hendrickson & Co., of Middletown, Butler county, Ohio, will promptly attend to orders for Short-Horn Cattle, Bakewell, Merino, South-Down, and Saxon Sheep; also for Berkshire pigs from Windsor Castle, imported from England, and twenty choice Berkshire sows, a part of which were also imported. Windsor Castle stands 3 feet high, and is estimated by competent judges to weigh 1000 lbs. Pigs of crosses with the imported Kenilworth, the large Miami, Byfield, and Grazier stocks, will likewise be furnished.

None but choice specimens of any of the above stock will be supplied, and at prices corresponding with the times. Address, post paid, as above.

Oct. 12th, 1843. R. H. HENDRICKSON & Co.

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. II. **NEW YORK, DECEMBER, 1843.** **NO. XI.**

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

FATTENING POULTRY.

As Thanksgiving, Christmas, and New Years, are fast approaching, when the demand for poultry is at its greatest height, and the quality of it is more curiously considered than at other seasons of the year, in order to obtain something choice for the festive days, we have thought a few words upon the fattening and preparation of it for market might now very appropriately be given, and perhaps interest our readers more than at another time.

The fowls being in good condition a fortnight to one month previous to the time they are wanted for killing, shut them up in a roomy, dry, well-ventilated, and warm building, with either a ground, stone, or plank floor, as is most convenient. This should be cleaned every day, and straw several inches thick spread over a part of it, especially where geese and ducks are shut up, for the purpose of giving them good beds to sit in. As often as the litter gets soiled, remove it, and put clean straw in its place. A constant supply of food and water should now be kept before them, allowing the fowls to eat and drink as often and as much as they please. Gravel is indispensable for their health, and charcoal, together with a little lime or ground bones, is beneficial. Fowls fat better when they can get at their food as often as they please, and are not so apt to gorge themselves and become surfeited.

For feed we prefer corn mostly; a little wheat, rye, or barley, is also very well as a change; oats have rather too much husk about them. In addition to these, boiled potatoes, sweet apples, pumpkins, and sugar beet, are excellent food, especially when mixed with a due proportion of mush or hasty pudding. Where sweet potatoes abound, they are an excellent substitute for the last. To the above, add daily a little lean meat, that which is cooked is preferred; and the last week of their fattening, for a finishing process, rice boiled in milk and sweetened with molasses, is very excellent. This may be called an expensive method; but our readers may be assured that the fowls will be enough better to pay for it. Meat derives much of its taste from the kind and quality of food that the animals consume; hence gross, fatty substances, fish, or anything that is disagreeable to the taste should be avoided in the food given to fowls during the fattening process, as these invariably impart more or less of their disagreeable flavor to the flesh of the poultry fed upon them. It is well known that the celebrated canvass-back duck derives its delicacy of taste from feeding on the bulbous roots of a peculiar grass growing in the Chesapeake bay, and that other kinds of ducks are scarcely eatable, in consequence of their living almost entirely upon fish. These remarks will hold good to most kinds of birds, both of the water and land, and, indeed, of all animals; accordingly as their food is good or bad, so will be the quality of the milk, meat, or eggs.

We recollect when a boy, of having occasionally seen geese and ducks nailed through the webs of their feet to planks and floors, and hens and turkeys tied up and so closely confined to stakes, that they could not exercise. This was done so that they might fat the faster! How shockingly barbarous, and any one guilty of such a practice in these days, ought to be indicted, and severely punished for their cruelty and cupidity. We are totally opposed to the close confinement of beast or bird. Without exercise, the system can not be in a healthy state; and the meat of close confined animals is never as good, to say the least of it, as when they have plenty of fresh air, and are allowed to move moderately about.

The best method of killing fowls, is to cut their heads off at a single blow with a sharp axe, and then hang them up and allow them to bleed freely. By this process they never know what hurts them, or endure pain for a second. Wringing the necks of poultry is almost as shocking as nailing their feet to planks for the purpose of fattening them, and follows in the same barbarous category.

Scalding the fowl previous to picking, injures the feathers, and makes it troublesome to dry them, and we think the quality of flesh is somewhat injured by this process, especially if the weather be not pretty cold at the time. They should be picked as soon as possible after being killed, and their offal taken from them; be clean rinsed then in cold water, and hung up to dry, and kept as seperate as possible till sold; packing them together in heaps injures the flesh. To be hung up and frozen for a few days, or even weeks before eating, makes the flesh more tender. To keep them the same length of time after roasting, especially if well stuffed, also adds to their delicacy of taste and tenderness.

When the bird is brought on to the table, it is perfectly shocking to see its head, legs, and feet, left upon it, though we know in many places this is fashionable, and considered highly genteel; but for our own part we detest such offal, and the sight of them frequently destroys our appetite for the time being. The process of carving also at the table is a dead bore. We like the French fashion of cutting up the bird in the kitchen or at a side table, and having it passed round on the dish, every one then helping himself to such pieces as he likes best.

FERTILITY OF SEA-MUD.

Sea-mud varies greatly in its composition, dependant something upon the soil of the neighboring uplands. It is considered a valuable manure in Europe, and is sought for with avidity, and transported not unfrequently considerable distances into the interior. We have seen it used with good effect in the United States, from Massachusetts to Pennsylvania; and are told that in Delaware and Maryland, and even farther south, it is highly prized by those who have tried it. On Long Island, the past summer, we were occasionally shown the fertilising results, not only of sea-mud, but of the marsh soil also, applied to the uplands a little removed from the borders of the marshes and the seashore. Our intelligent correspondent, Mr. Partridge, informs us he has used beach-mud in various ways with good effect; and that the past summer, two gentlemen whose country seats border his mill, were allowed to make use of the sediment from the tide mill-pond, and they found it added greatly to the productiveness of their gardens.

Sea-mud may be applied in different ways, according to its constituents. If it abounds with clay, it should be taken in the fall of the year, and spread broad-cast upon the land, and thus lie exposed to the action of the frost all winter. This pulverises it well, and in the spring of the year the roller should be passed over it in dry weather, followed by the harrow, and if any lumps remain after this operation, let them be beaten fine with the dung-beater. This is considered one of the best top dressings for grass land which can be given; it also answers well to be plowed in for either grain or root crops. Where the mud abounds more with sand, it is an excellent thing to put into barn yards and pig-styes, to be incorporated with the litter and manure; it may likewise be thrown into a heap until it becomes completely pulverised, and then spread upon the land.

As air-slacked lime or small broken lime can be obtained in this city for about half the price of quick lime, Mr. Partridge suggests that it would be an excellent ingredient to mix with the sea-mud, for the purpose of forming a compost. A bushel or two of the lime, to a cart-load of the mud, he thinks a good mixture. When it abounds with considerable vegetable matter, we would recommend a greater proportion of lime, say from one to ten or twenty parts. Ashes and charcoal dust are excellent ingredients to mix with sea-mud, and when either of these or lime is used to form a compost, they make it much more lasting. It is less labor to transport the sea-mud directly to the place where it is to be used, and spread it broadcast at once upon the land; and as the saving of labor is quite an object in our country, we have found that this method of applying it is the most generally practised.

With the exception of a few of our more intelligent farmers, sea-mud and marsh-mud as fertilizers, are not valued as highly as they ought to be in the United States. They exist in immense quantities all along our seaboard, and may be had in an unlimited extent for the mere labor of transportation. We hope that some experiments may hereafter be made with them by some of our readers on the different kinds of crops, and that they will give us the results. The time, we think, is approaching, when sea-mud and marsh-soil will be as highly prized here as they now are in Europe.

SKETCHES OF THE WEST.—NO. II.

Plantation of Mr. Grey.—One of the best plantations, especially for its farm-buildings, which we visited in Kentucky, was that of Mr. Benjamin Grey of Versailles. The house, as is usual in the more southern states, stands near the centre of the domain on rising ground, and commands a fine view of the country around. It is in cottage style, large and roomy, and flanked by thick, strong chimneys, built up outside of the gable ends. A pretty yard of smooth green-sward, decked with shrubbery and evergreens, is enclosed around with pointed white palings, and adjoining this is a noble park, formed by merely underbrushing and thinning out a few of the trees of the original forest. These are usually termed wood-land pastures in Kentucky; yet in most instances, they better deserve the name of park, than many of those on noblemen's estates in Europe.

Crops.—Mr. Grey's farm being principally devoted to stock, and what is rather unusual here, dairy products, the crops are but a secondary consideration. Hemp is the main one to which he gives his attention; and in addition to this, he raises a sufficiency of corn and the smaller grains for his own consumption. The rotation is much like that described in our first volume, under head of Tours in Kentucky.

Stock.—This is very fine indeed, Mr. Grey having been highly spirited in this matter. His Short-Horns are choice, and quite numerous. We particularly admired the cow Mary Ann, with the calf at her foot. She has a fashionable and airy form; an up-head, and deer-like action; handles well, and in addition to all these, we were informed that she is an excellent milker. Three heifers of her produce we also admired; the two youngest were strikingly like their dam. After the Short-Horns, we were shown a few good Cotswold, and South-Down sheep, imported direct from England by Messrs. Bagg & Wait of Orange Co., in this state. The stock-hogs are a cross of the Berkshire upon the Thin-Rinds, (a grade Chinese,) and they make excellent porkers.

Farm Buildings.—These are among the most complete we have seen in any place, and we speak of them with the more pleasure, because they are blameably deficient in farm buildings throughout the whole southwest. The climate here, it is true, is warmer and much more open than at the north; but it is in this *very openness*, that consists the principal suffering of the stock. The ground during this time is muddy, cold, and damp; and worse, consequently, for animals to repose upon, than when frozen dry, or covered with snow. Sudden changes are continually taking place. Mild weather prevails for a few days, relaxing the system; this is then followed not unfrequently by intense cold; the thermometer sinking in 48 hours from 55° or 60° above, to zero, and sometimes 8° to 10° below it. These sudden changes are very injurious to man and beast, and far more to be dreaded than the steady cold of northern latitudes; and for this reason, more attention should be paid to the warmth of their dress on the part of the people here, and to the housing of stock, than is generally done. It would lessen disease, add to their longevity, and give a handsomer, fuller, and more healthful physical appearance. But to return more immediately to our subject.

With the exception of the usually reserved gangway on the barn-floor, the lower story is devoted to stables. These are planked, and each animal is accommodated with a separate stall. Behind them is a shallow gutter, running the whole length of the stable, which conducts the liquid falling from the animals into a cess-pool in the yard, and is there absorbed by muck. The solid manure is also equally carefully saved and applied to the land, and notwithstanding the proverbial fertility of the soil of Kentucky, Mr. Grey assured us that he considered himself well paid in the increase of his crops, for the labor employed in thus saving and applying his manure. Over-head in the barn are lofts for hay and straw; a straw-cutter to prepare them for feeding; cribs and bins for grain; and a large square box with heavy wooden pounders, for the hands to pound up corn and cob into meal on rainy days, when they can do nothing else. This cob-meal is usually mixed up with water, and allowed to stand till it ferments, and is then fed to the stock.

The Dairy.—This is a sufficiently roomy building, of one story, situated in a little dell a short distance from the mansion. One of the gable ends abuts against a nearly perpendicular cliff, out of which bursts a clear gurgling spring, that takes its course through the centre of the rocky floor of the dairy, and then finds its way into the valley below. Here is every convenience for making butter and cheese, in which Mr. Grey excels. We have dwelt thus minutely on the plantation, stock, and buildings of Mr. Grey, because we consider them an excellent example to follow in Kentucky; and also for the purpose of giving our northern readers a general idea of the husbandry at the west, of which the great majority entertain the most indefinite notions imaginable.

Mr. Hart's Plantation.—After taking an early dinner, Mr. Grey ordered up his buggy, and we started for Mr. Nathaniel Hart's. This was some few miles off, yet in order to get there we paid no attention to the public roads, but took our way over gentle hill and dale, through woodland-pastures, and among fields containing a hundred acres or more in each, under a single fence. For the purpose of opening and shutting the field-gates as we passed, we were accompanied by an ebony urchin, as out-rider, mounted on the bare back of a high-spirited gray nag, which he rode with no little address. This seemed quite a gala business for him; and bare-headed, with his thick woolly locks fluttering in the wind, and his shirt-collar wide open, he went grinning along, now advancing at a hard gallop, and anon closing up at a fast trot, swinging open and shutting to the gates, shaking his pate, and hallooing to every animal that he thought did not move with sufficient alacrity from our destined path.

"Yo! ho! So you no move, Misser Cow—then Pompey make you," and at her he charged, brandishing a long stick, like a Cossack of the Don with his spear, the gray nag at the same time laying back his ears, and opening his mouth, and showing his teeth, as if grinning in fiery sympathy with his redoubtable rider, and ready to devour the animal that so sluggishly obstructed the path. But one look from the cow, or whatever beast it might be, at the horse and boy, seemed quite enough; and without waiting further hints, they would shake their tails, then give them a slight curl, and set off at a round scamper, the triumphant Pompey following up their career a short distance, singing with high satisfaction:—

I tell you so, now Misser Cow;
Yo, ho, you go, bow wow, bow wow.

Mr. Hart's plantation is a very fine one, and he is one of the largest hemp-growers in Kentucky. He has done much to introduce a system of water-rotting hemp in ponds, which we think is the best and most simple of the kind yet tried. He has promised us a description of this, with his late improvements, and we trust that we shall be favored with it soon, for the benefit of those desirous of preparing their hemp for market by the pond-water-rotting process. There is so much in common with Kentucky plantations, that it is unnecessary to dwell further upon particulars. Mr. Hart's stock of cattle is principally derived from the first importation of the Short-Horns into Kentucky, in 1817. He keeps a flock of about 800 Merino sheep, which, low as wool is, he thinks make him as good, if not a better return, than anything else which his plantation produces. Sheep-husbandry is attracting much attention at present in Kentucky. It is a very superior region indeed, for sheep, and if the planters would go judiciously into the fine-woolled breeds, wool would soon become an article of large export with them, and a source of considerable profit. Let it be remembered, that the cheaper and better wool can be produced, the more there will be consumed of it; and the cheaper and better, woollen cloths will be furnished in return. We need not fear overstocking the country in our generation.

Mr. Hart keeps quite a herd of deer in his park, and several head of elk. These last, with their large branching horns, and lofty, erect heads, have a noble appearance. He formerly had a few buffaloes, but they became so troublesome in breaking down fences, and sallying out whenever they pleased, to the great terror of the country round, that he was at last obliged to kill them. Buffalo bulls get somewhat ferocious as they grow old, and are rather dangerous animals on the plantation. While in Kentucky, we picked up some comic anecdotes of their doings as they turned out; but a feather's weight in the other scale might have made them equally tragical; and upon the whole, unless enclosed within a fence that they could not break down, we should advise our friends to eschew keeping buffaloes.

BREEDS OF FOWLS.

In perusing the American Poultry Book, which we noticed in our October No., we find the following recommendation for selecting a stock for the poultry-yard:—

> The better practice would seem to be, in order to make the poultry-yard most profitable, to select *no particular breed*. Commence with pullets and cocks of the first year, of all the breeds mentioned above, except bantams, and without any regard to color excepting those of a pure white. It would be well, if possible, to select the cocks from the same yard. Every year exchange a nest-full of eggs with your neighbors, or such as have good fowls. By pursuing steadily this practice of exchanging eggs, you will yearly infuse new blood into your stock, and avoid the inconvenience of breeding in and in. Without being aware of this fact, many farmers find their stock *running out*, &c.

Now the above plan for forming a stock for the poultry-yard we hold to be perfectly absurd, and one might with just the same propriety, advise mingling all the different breeds of horses or cattle together, for the purpose of forming a good stock, as the different varieties of fowls; and we need only consider for one moment, the incongruity of the materials which form them, to be convinced of this. There is the pugnacious Game-cock; the pheasant-shaped Top-knot; the coarse Malay; the thick-skinned Negro-fowl; the tender Chinese or Merino; the tailless Rumpless; the Friesland, with reversed feathers; the short-legged Creeper; the five-toed Dorking; &c., &c.; all thrown into one helter-skelter mass, the progeny of which would prove as contemptible a race of mongrels as ever graced a dung-hill, and beyond the precincts of a dung-hill they would scarcely be worth removing.

Those who have most eminently succeeded in breeding fowls, have adopted the same course in doing so, which is followed by judicious breeders of animals; and that is, by sticking to the breed, when it is a good one, in its utmost purity; choosing the best of the flock from which to propagate, and thus continuing. In-and-in breeding, to a certain extent, when pursued by those who thoroughly understand their business, has been productive of the best results. The finest, the largest, and the most *indomitable* game-cocks have thus been bred; and if we possessed a good breed of poultry of any kind, we should be very careful how we exchanged eggs with our neighbors for the purpose of improving them. If they had a superior stock to our own, of the same breed, we would select from among them grown birds only; we should then know what we got, and be able to make improvements upon those we already possessed. It is by mingling all sorts of breeds together, without any definite notion as to the results, that "many farmers find their stock *running out*"; and if every one were to follow this course, we should soon be without a single good fowl in our poultry-yards. We really regret to see a book like this on American Poultry, which in the main is a good little work, recommend such a course of breeding; for in our humble judgment it is the very worst which could be pursued.

We can not say that we much like the author's advice either, as to the choice of a cock. Why he should be "restless, not very large, with a thick and stout bill, long spurs," &c., we can not divine. The best cocks we ever kept, and those of the most indomitable courage, when fighting was necessary, were the most quiet, attentive, and polite in their seraglio: they were also of rather large size for their breed; with fine heads, bills, feet, and legs.

NEW YORK FARMERS' CLUB.

The Farmers' Club resumed their meetings, on Tuesday, Nov. 13th, at the Repository of the American Institute.

The meeting commenced by reading a communication from the President of the Manhattan Gas Light Company, David C. Colden, Esq., inviting the attention of farmers, and all interested in agriculture, to the value of the refuse of gas-works as manure. Extracts from the works of Liebig, and Johnston were then read, setting forth the powerful fertilizing properties of ammoniacal liquor, with which the refuse of gas-works is found to be strongly impregnated. After some conversation on the subject, in which Mr. Stevens, Commodore De Kay, Mr. Meigs, and Mr. Wakeman, took part, as to the best method of disposing of this communication, it was resolved that it be referred to a committee consisting of Gen. Tallmadge, Mr. Prince, Gen. Johnson, Col. Clarke, and Mr. Townsend, to report at the next meeting of the club.

Mr. William R. Prince, of Flushing, presented to the meeting, specimens of nineteen different varieties of apples, among which were several of very large size and superior quality.

Mr. Meigs presented seeds of a new variety of squash, the *Cucurbitur bicolor*.

Mr. Ward, cuttings from a vine which produced ripe Isabella grapes on the 5th September.

A desultory conversation then ensued as to the future proceedings of the club. Much diversity of opinion appeared to exist as to the propriety of holding the meetings weekly, fortnightly, or monthly, when a committee was appointed to report upon the subject.

Dr. Field next called the attention of the club to a subject which he considered deserving their serious attention, viz: the present condition of the children now in the alms-house on Long Island. He thought they might be employed advantageously to themselves and the public, either in the cultivation of the mulberry, and general management of silk, or in horticultural occupations. He then proceeded to describe with feeling eloquence, their present deplorable condition, both morally and physically, arising from the system of idleness they are now allowed to pursue.

He was followed by Mr. Stevens, and Mr. Carter, who both agreed that it was high time some steps should be taken to ameliorate the condition of the poor children, and it was finally resolved:

That a committee consisting of Dr. Field, Mr. Stevens, and Mr. Carter, be appointed to investigate the subject, and petition the corporation that the pauper children of this city, now on the Long Island farm, be employed in horticultural pursuits generally, and also in the raising and manufacture of silk.

Mr. Stevens then made some remarks on the subject of wax-flowers and fruits, a specimen of which was exhibited by Mr. Lane. Mr. Stevens thought that a model of every new variety of fruit ought to be taken in wax, and preserved at the Repository of the Institute.

A motion was made and carried that the executive committee be instructed to consider the subject.

Gen. Tallmadge suggested that a list of donors of fruits, &c., be kept by the secretary, and placed on the records of the club at every meeting, which was unanimously agreed to.

The meeting then adjourned to Tuesday, the 28th November.

The following are the extracts on refuse gas, sent to the club by the President of the Manhattan Gas-Light Company:—

"If the properties of manure, and its agency upon the growth of the vegetable world, can be explained by chemistry, we shall find the ammoniacal liquor produced in gas-works, to be a valuable substitute for those manures, by the application of which it is intended to supply the soil with nitrogen.

"One of the most valuable manures is urine, and its excellence depends almost entirely upon the ammoniacal salts which it holds in solution. The relative value of urine as manure, depends upon the quantity of nitrogen the different kinds yield. Thus human urine is the most esteemed, and that of horned animals the least."—*Clegg's Treatise on Gas-Making.*

According to Liebig, 547 pounds of human excrement contain 16.41 pounds of nitrogen; a quantity sufficient to yield the nitrogen of 800 pounds of wheat, rye, oats, or of 900 pounds of barley. How much more, then, will be supplied from an equal weight of ammoniacal liquor!

Mr. J. Watson, the manager of the gas-works at Kirriemuir, has favored me with the following facts:—

"The ammoniacal liquor on the surface of the tar-well has been found a very great improvement as a manure for raising crops of grass in this quarter, by being sprinkled on the field in the same way as water is put on public streets in large towns, to keep down dust in dry weather. I have myself seen an experiment of this tried, and can say that part of a field of grass sprinkled in this way, after the first cutting, was far superior to any other part of the field receiving manure of any other kind, and that the part so sprinkled, or showered over, was ready to be cut down a second time in the course of between fourteen days and three weeks; whereas, the other part of the field cut at the same time, was only beginning to spring or rise from the roots in that time. It must be mixed up before use with four parts of common water. In particular, the said experiment of the gas-water has been used by David Nairn, Esq., Doumkilba, near Meigle, in this neighborhood, with success; and I am informed that he has purchased and taken a lease of the ammoniacal liquor from different gas-companies in this country.

"I am convinced much good might be derived from different qualities of the refuse products of gas-works as manure. An inquiry into this subject would remunerate the engineer or agriculturist to the full, and would besides confer a considerable benefit upon his fellows, and give that practical proof of the correctness of a theory so welcome to the man of science."

"The fertilizing power of gypsum has been explained by its supposed action on the ammonia which is presumed to exist in the atmosphere. If this be the true explanation, a substance containing ammonia should act *at least* as energetically. At all events, the action of foldyard manure and of putrid urine, is supposed to depend chiefly on the ammonia they contain or give off.

"Now among the substances containing ammonia in large quantity, the ammoniacal liquor of the gas-works is one which can easily be obtained, and can be applied in a liquid state at very little cost. It must be previously diluted with water till its taste and smell become scarcely perceptible.

"I would propose therefore, as a further experiment, that along with one or more of the substances above mentioned, the ammoniacal liquor of the gas-works should be tried, on a measured portion of ground, and, if possible, in the same field.

"Soot as a manure is supposed to act partly, if not chiefly in consequence of the ammonia it contains. In Gloucestershire, it is applied to potatoes and to wheat, chiefly to the latter, and with great success. In the wolds of Yorkshire it is also applied largely to the wheat-crop. In this country it is frequently used on grass land. I am not aware that it is extensively used on clover. I am inclined to anticipate that the sulphur it contains, in addition to ammonia, would render it useful to this plant. At all events comparative experiments in the same field with the gypsum and the ammoniacal liquor, are likely to lead to interesting results.

* * * "Of ammoniacal liquor 100 or 200 gallons per acre, according to its strength, for this is constantly varying. It must also be diluted with so large a quantity of water as will render it perfectly tasteless, and is likely to prove most beneficial if laid on at several successive periods." —*Johnston's Agricultural Chemistry*, part 1.

"Sal ammoniac is probably too expensive an article to be employed; but sulphate of ammonia may be had of the wholesale chemist at a price considerably more reasonable, and the ammoniacal liquor of the gas-manufactories, through the distillation of coal, is a still cheaper commodity." —*Liebig's Agricultural Chemistry.*

"Its efficacy as a manure is vouched for by many who have made trial of it upon their land. See a communication by Mr. Paynter on gas-water as a manure."—*Journal Royal Ag. Soc.*, No. 1.

THE NEXT ANNUAL SHOW OF THE STATE AGRICULTURAL SOCIETY.

As the annual show of the New York State Agricultural Society is now sure to bring fifteen to twenty thousand strangers into the place where it may be held, to pass three or four days there, and spend their money pretty freely, it has become quite an object with the different towns situated on the great thoroughfares, to have the exhibitions within their boundaries as often as possible. Strong movements will be made for these hereafter; but we trust that the Society will weigh well the different claims preferred for its favor, and that no other consideration than the public good, and the spread of its influence, will have weight in its decisions.

Albany, Syracuse, and Rochester, each having had the advantage of one of these meetings, other towns now are soliciting the like favor; and among those which are preferring their claims for the show of 1844, we understand that Buffalo, Utica, and Poughkeepsie, are the most prominent. Perhaps as the northern and western parts of the State have now had the benefit of three of the exhibitions of the Society, it is no more than fair that some attention be paid to the southern and eastern portions. We have heard this city named as a very suitable place for the show of next year, and the only objection we can anticipate to it is, that it is an extreme end of the State. Granted; and is not Buffalo the same? Yet, notwithstanding this, we contend that New York or Buffalo is just as fairly entitled in their turn to one of the exhibitions of the Society, as Albany, Syracuse, or Rochester. However, as our own interests might be somewhat served by a meeting of the State Society in this city, we shall waive advocating its claims to one for the present, and content ourselves with stating those of Poughkeepsie.

1. This town is 210 miles by the usual travelled route, northwest from Montauk Point, the southeast end of the State. This is as great a distance as from Poughkeepsie to Syracuse, and 41 miles further than the railroad route, though a circuitous one, from Syracuse to Buffalo; so that it may fairly be said to be the hither-end of a third-part of the limits of the State.

2. The population, from Dutchess county, south and east, includes about one fourth of that of the whole State.

3. Poughkeepsie is easy of access by land or water, and being situated on the Hudson, hundreds of strangers from the neighboring States, especially the southern ones, would visit a show here, when they could hardly be induced to go farther north or west, and as these visiters are always purchasers to a greater or less extent, it is quite an object to get them to attend.

4. This town is the capital of one of the oldest, wealthiest, and most populous counties of the State, and the one whose general system of agriculture is probably more highly advanced than any other. Dutchess, and the neighboring counties, have also considerable improved stock—much more than we had any idea of till our recent excursions in these parts. Durham, Devon, and Ayrshire cattle abound; superior road and blood horses; Cotswold, Leicester, South Down, and numerous flocks of Merino sheep; the products of the dairy; agricultural implements, and roots, seeds, fruits, flowers, and domestic fabrics.

5. Poughkeepsie is ready at her own expense, to build pens for the stock, and furnish all other needful accommodation for the Society, which will be a saving of expense to it of at least $1,000.

Lastly, there is more accumulated wealth in the southern, than other parts of the State, and the Society, by holding a fair proportion of its shows in this quarter, will make itself many staunch friends, and be introduced to thousands who would otherwise be ignorant of its great public merits. The Agricultural Society of the State of New York is looked up to as an example throughout the country, and it should be careful to avoid even the appearance of being partial or local in its proceedings. The national societies of Great Britain and Ireland, adopt the course of holding their shows in, not only the central, but the extreme parts of the kingdom; and this is one great reason of their popularity among all classes.

Tour in England. No. 15.

THINKING that our readers had become somewhat satiated with so much upon foreign matters as have hitherto found place in this journal, we had desisted for several months past, giving sketches of the agriculture of England; but having recently received so many solicitations to continue them, we again take up the subject, and shall pursue it pretty regularly through the whole of our third volume, if such seems to be the pleasure of a majority of our subscribers. Perhaps, to these, we may also add sketches of some things we saw in Russia, the recollections of which are very pleasant, at least to us, yet whether we shall make them equally so in relating them to others, remains to be seen.

CHATSWORTH, SEAT OF THE DUKE OF DEVONSHIRE.—In returning from Yorkshire to London on the North Midland railroad, we stopped at the Chesterfield station, for the purpose of making an excursion to Chatsworth, to view the celebrated gardens and immense conservatory of this superb place. It was a raw morning in August, and as we jumped from a confined seat in the rail-coach, we were glad to be on our feet once more, and have an opportunity of rousing our blood by a smart walk from the station into the town. We stopped at the Angel inn, took a hearty breakfast, and while waiting a gig being made ready to convey us to Chatsworth, stepped out for a stroll over the place. Chesterfield is a dingy old town, of about 6,000 inhabitants, and has little to recommend it to the notice of strangers, save the spire of All Saints' Church. This rises to the height of 230 feet, is curiously channeled, and covered with lead, and is so much out of perpendicular, as to attract marked attention in passing it, even when at a considerable distance. It being market-day, the town was thronged with farmers from the country, exposing stock and agricultural products in the square for sale. There was little in these, however, deserving particular attention, and after giving them a hasty look, we returned to the inn. As we came up, a dapper waiter announced the "oss and gig as *h*all ready;" when in we jumped, and set out for Chatsworth at a round pace, distant, if we recollect right, about 8 miles.

Derbyshire possesses the wildest and most broken scenery of any county in England, and after passing over the flat surface of Yorkshire, it was quite a relief to find ourselves trotting up and down along a road winding picturesquely around high hills, and over deep narrow dales. An hour's drive or so, brought us to the pretty little village of Edensor, close by the inn of which, is the entrance to Chatsworth. The village is situated within the park, and is the property of the Duke, and certainly it is the most charming one we ever saw. Every cottage is of stone, and no two alike in their architecture. One is a mimic Gothic castle; another a cottage ornèe; a third in the Elizabethan, a fourth in the Swiss, and perhaps a fifth in the Tudor style. Everything then was so complete about them—the pretty gardens full of flowers—the hedges so neatly trimmed—the yards, laid down with the greenest and softest of turf, and the shrubbery so tastefully planted! These were the residences of the laborers on the estate, the possession of which any one might envy them, and desire to be able to call his home. Attached to the village is a fine old church, and around it an ample yard, handsomely walled in with strong mason-work. Altogether, this village is quite a gem in its way, and we were going to add, an epitome of its owner's heart; for on all his estates, whether in England or Ireland, the Duke of Devonshire has made it a point to protect and bountifully provide for his people. There is no want, or suffering, or seeking the poor-house, by the tenantry, allowed by this kind-hearted, benevolent man.

Turning from Edensor, and ascending a mound-like hill to the left of the carriage-road, the palace and the grounds of Chatsworth appear to the greatest advantage. Immediately below is the river Derwent, tracing its sparkling course through a rich vale, where were perhaps 1,500 deer browsing or taking their gambols. A handsome stone bridge spans the river, and just beyond, the ground rises in terraces to a narrow plain, where stand the noble palace, with its out-buildings, and the immense conservatory, in magnificent grandeur. Back of these rises a lofty hill, the steep sides of which are thickly planted with forest-trees, and the summit is crowned with a high tower of octagonal shape, built of stone. We were received at the palace-gate by a servant in handsome livery, and passing into the gallery of the court, a fine hearty girl made her appearance to conduct us over the building. The front of the palace is 350 feet, and one of the side wings about 400 feet long, and this whole area contains a series of apartments called the drawing-room suite. An entire number of this paper would hardly suffice to give the reader a complete description of these magnificent rooms, and the treasures of art they contain, we therefore pass them over in silence. From these we strolled into the orangery, which is about 30 feet wide, and 200 feet long. It is full of beautiful exotics, and among them were several specimens of the Rhododendron Arboreum, which bore, the preceding summer, over 2,000 flowers. We now walked out to the lawn in front of the palace, where one of the under-gardeners appeared to conduct us over the grounds. These are extremely beautiful, with walled terraces in the Italian style, and fountains. One jet d'eau throws up a column 90 feet high. But the great show here in the way of water-works, is the cascade. It is entirely artificial, and must have been made at a great expense. The water rushes out from a series of lakes on top of the hill, and comes pouring down its side, taking a leap of about 80 feet from one of the arches, and then falls for a length of 300 yards over a series of 24 ledges, and disappears amidst masses of rock, on the edge of the lawn. Here it finds a subterranean passage to the river Derwent. These water-works are looked upon by some critics with affected contempt; not so with us, however, we greatly admired them in their way; and yet we have seen Niagara a thousand times, and had a peep at most of the other water-falls worth looking at in the United States. We have no sympathy with such hypercritics as profess a distaste to the cascade at Chatsworth: as a work of art, it is a magnificent thing, and to our eye, in keeping with the palace and grounds; and we viewed it with interest. A bronze tree a little farther on, excited still greater curiosity with us than the cascade, for it was made to act the part of a fountain, by throwing water from a thousand sprigs and leaves all around in a shower of spray.

But leaving this and the exquisite scenery of the lawn, we passed on by a winding carriage-road to a short distance to the conservatory. This was 350 feet long, 150 feet wide, and nearly 70 feet high; and when fully completed, is to have an additional length of 150 feet. The roof is an arch, and is covered with plate glass of the best kind, and so thick as to resist the heaviest hail. It is heated by iron tubes of hot water, and to these are added others for cold water, and the whole, if stretched out to a single length, we were informed would extend nearly six miles. The plants and trees here are distributed in open borders, each class being placed in the soil most proper for it, and the temperature so regulated as to suit their natural state as nearly as possible. Not far from the centre is an immense rockery rising about 50 feet high, and from the fissures of the thick slabs of stone that compose it, the cactus and other plants grow out as in their natural state. Half way up this huge precipice is a little lake with islets, and in this, water-lilies and other aquatic plants of the rarest and most beautiful kinds. A wild goat path leads to the top of the rockery, and beneath it is a wide, deep cave. The variety of shrubs and plants in this immense conservatory is very great; some of the trees already reach nearly to the top of the roof, and others presented dimensions gigantic in the extreme for those within a green-house. There are wide folding-doors at each end of the conservatory, and any time he pleases, the Duke can have a drive with his coach and four horses through it. Taking it altogether, it is by far the most magnificent thing of the kind we have ever seen. The whole cost of it is not less than half a million of dollars, which is but a little over the present annual income of its wealthy possessor.

After leaving the conservatory, we took a zigzag road, and ascended through the forest to the crown of the hill by the octagonal tower. A peasant family was residing here, who permitted us to ascend it to the top. The view from this is no less extensive than beautiful, of Chatsworth and the wild broken country around. Descending from this high perch we had quite a chat with the peasant's wife. She informed us that the tower was built by a predecessor of the present Duke, for the purpose of giving the ladies at the palace an opportunity of seeing the fox-hunting which formerly took place at Chatsworth. Upon taking leave, the good woman directed a little rosy-faced daughter to show us the lakes on the hill, the sources of the cascade and fountains below. After something of a stroll through the woods, we found two large expanses of water belted in by thick rows of the larch and fir, and apparently as isolated as if in a wild forest of our own country. The white swan and the black are kept here, and most other kinds of curious water-fowl. Our pretty guide answered all our inquiries with intelligence, and at parting we gave her a small guerdon, for which she returned a grateful "thank'e zur" and a low courtesy, and then, with the lightness of a young fawn, skipped into the woods, and immediately disappeared. Descending the hill toward the palace we came to the stables. These are very extensive, of quadrangular shape, and large court-yards within. At a distance, with their imposing architecture, they might almost pass for the palace itself.

We now bent our steps to the house of the celebrated Mr. Paxton, the head gardener of the Duke of Devonshire, editor of the Magazine of Botany which bears his name, and one of the first botanists of England. His residence is within the park, about a quarter of a mile from the palace, and is a roomy, beautiful cottage, completely enveloped in flowers and flowering shrubbery, with a handsome little conservatory at the end. Much to our regret, he was not at home; but a sub-gardener, quite an intelligent man, volunteered to show us the gardens. They occupy 12 acres, and are enclosed by a thick, brick wall, about twelve feet high. Here are the experimental and kitchen gardens, and hundreds of fruit-bearing espaliers, trained up the walls. In addition to these there are forcing pits in abundance, and upward of 90 hot-houses, about 300 feet long each, devoted to different purposes, one of the most extensive of which is the growing of pine apples. All these things may be considered very extravagant, but in supporting them, the Duke of Devonshire has done much for the cause of science, and has conferred a lasting benefit on his country.

We left Chatsworth with regret; the day we spent there we would have gladly prolonged to a week, and then we should have gained but an imperfect knowledge of the treasures of nature and art which are stored up here for the admiration of thousands of visiters. Mary Queen of Scots was some time a prisoner here; so also was Marshal Tallard, who was captured at the battle of Blenheim. What were the thoughts of the beautiful Queen upon taking leave of it, history does not record; but the Marshal, no less gracefully than happily, said: "When I return to France and reckon up the days of my captivity in England, I shall leave out all those I have spent at Chatsworth." And so thought we, pausing on the mound-like hill again, as we retraced our steps to Edensor, and cast a last lingering look upon the park, and palace, and forest hills in the background, lit up by the clear, glorious sun just sinking beneath the horizon.

AGRICULTURAL SHOWS.

THE PHILADELPHIA SOCIETY held its annual show at the Lamb tavern, October 4, 5, and 6. The Germantown Telegraph states, in the *Report of the Committee of Arrangements*, that the display of horses was unusually attractive, exhibiting the various breeds for the turf, road, and farm, in considerable numbers. The Durham cattle seem at last to be getting the better of prejudice in that quarter, and in their superior forms and deep milking qualities, have shamed nearly everything else from the ground, save a few fine Devons and capital grade Durham milkers. Of sheep and swine, there were very few present, which is the more to be regretted, as these animals exist in considerable numbers and of superior breeds throughout the neighboring counties of Montgomery, Delaware, Chester, and Lancaster. Of Agricultural Implements and Products there was a good show, and the Plowing-Match proved an interesting affair. Peter A. Browne, Esq., delivered the address, which we find at length in the Farmers' Cabinet. Among other things, he contends no less strenuously than justly for the establishment of Agricultural schools and Professorships. From another part of the address we subjoin a few suggestions.

First, then, it is feared that our agricultural friends have not yet paid *all* the attention that the subject demands, to a judicious rotation of crops, adapted to our climate; particularly in regard to *roots*.

Second. Much has been done, that is beyond all praise, in insuring the best breeds of cattle. While we hear pronounced with gratitude, the names of Mease, Powell, Brantz, Clay, Gowen, and Kelley, let us not forget that the task is not finished.

Third. Soiling, it is apprehended, has been too much neglected by most American husbandmen.

Fourth. Irrigation has also been too little attended to in the United States.

Fifth. Proper care and precaution have not been sufficiently bestowed upon the selection of seeds. This is a subject of the greatest importance.

Sixth. Much is yet to be learned in regard to the preservation and economical use of manure.

Seventh. The introduction, more generally, of labor-saving machinery, and particularly of the itinerant thrashing-machine, deserves to be mentioned.

Eighth. Gardening and raising fruit are much neglected by our farmers.

It is respectfully suggested that special committees might, with advantage, be raised upon these and other useful topics, to report at the next annual meeting.

Pennsylvania contains nearly thirty millions of acres. According to the census of 1840, she had a population of one million seven hundred and odd thousands, which is nineteen acres and a fraction for each inhabitant. In 1842, she raised, of grains of all kinds, upward of sixty millions of bushels; of potatoes, nearly thirteen millions of bushels; of hay, upward of two millions and a quarter of tons; of flax and hemp, upward of three thousand three hundred tons; of tobacco, four hundred and eighty thousand tons; of silk, upward of twenty-one thousand pounds; of sugar, nearly three millions and a half of pounds; and of wines, nearly eighteen thousand gallons.

THE HENRICO SOCIETY held its third annual show at Richmond, Virginia, November 1st. The proceedings are published in the Richmond Enquirer. The Executive Committee reports, that although there is a falling off in its receipts, there is an increased interest and attention to its proceedings by the planters. Mr. C. T. Botts, Editor of the Southern Planter, made the address, from which we subjoin an extract.

This society was organized and has been chiefly supported by a few public-spirited gentlemen in the neighborhood. Its beneficial effects are felt and seen by all of you. To form a proper appreciation of them, you have only to ride in any direction about the suburbs of the city. Rude grounds have been converted into productive gardens, and barren wastes into smiling fields. I recollect a lady's saying to me last summer, that she meant to make her husband become a member of this society, because it had done so much to beautify the rides and walks about the city. She declared the time had been when it gave her a fit of the horrors, (she was a nervous lady,) to order her carriage for an evening drive; but that now, there was nothing that she and her children enjoyed so much. But this is not all. Let him who has been familiar with your market for the last eight or ten years, compare its present abundant supplies of the finest fruits and vegetables, with the meager exhibition of former days; and, after all, let us be as sentimental as we will, a good market plays a very important part in the comedy of human happiness. Our merchants and mechanics too should remember, that these exhibitions are annually becoming more and more attractive, and that they are by no means inefficient in increasing the trade of the city. But, over and above all considerations of dollars and cents, let us, one and all, come forward and enrol our names as members of this association, which represents the great agricultural interest of the state, and which should be the pride and ornament of its metropolis.

LAKE COUNTY SOCIETY.—The show of this society took place at Medina, Ohio, and a complete account of its proceedings may be found in the Painsville Telegraph. In addition to the usual show of stock, &c., an extensive procession was got up of wagons and carriages, preceded by bands of music. One of these held no less than 35 ladies, engaged in the laudable occupations of knitting, sewing, spinning, and various other domestic employments. We wish we could chronicle more such industrial displays, for we consider them an excellent feature in agricultural shows.

BOURBON COUNTY SOCIETY OF KENTUCKY.—We learn from the Paris Citizen, that the Eighth Annual show of this Society took place near Paris, and continued three days, and is said to be the largest and most varied ever held in Kentucky. The first two days were devoted to the exhibition of domestic animals, agricultural products, and farming implements; the third day, to that of domestic manufactures. The show of horses present was considered very superior; they were of all varieties, from the mettlesome thorough-bred, to the enormous cart-horse. The Durhams and other horned stock were well represented, and gave evidence in their splendid proportions of the superiority of Kentucky pastures. The descendants are said to be an improvement over the original importations from England. Mr. Clay was present, and had a superb pair of blankets presented him by Mrs. James Hutchcraft. These were made from the wool of Leicester sheep, and were of uncommon size and thickness, weighing 23 lbs. the pair. On the presentation of these blankets, Mr. Clay was addressed by the Hon. Garrett Davis, M. C., and he replied in his usual elegant and happy manner.

HAMPSHIRE, HAMPDEN, AND FRANKLIN SOCIETY, MASSACHUSETTS.—The united show for the three wealthy and populous counties above, came off at the beautiful town of Northampton, on the 18th and 19th October, and we much regret on more accounts than one, that we could not be present. The Boston Cultivator furnishes a full report. A large number of working-oxen of course were present, and to these were added some superb fat oxen, exhibited by Mr. Sumner Chapin. The committee who reported upon this subject, attributes the superiority of the cattle to the large infusion of Short-Horn blood in their veins, and hence their fine symmetry, light offal, and increased weight of flesh on the more valuable parts, as compared with native stock when fattened for the shambles. Mr. Paoli Lathrop exhibited some choice Short-Horns. Of native cows the committee thus speak:—

Of the ten cows entered for the premium as *native* animals, nearly or all have an intermixture of Short-Horn or other foreign blood. We awarded to Mr. Minor Hitchcock the first premium (in this class. In his written statement to us it appears that her average product in milk for the six months, ending 1st October, was 49 lbs. per day, and in the months of June and July, 58 lbs. per day. In butter, her average product in the same time was more than 11 lbs. per week, and in the month of July alone, nearly 14 lbs. per week; yet in the same time he used the necessary milk and créam for his family of four persons. Your committee have entire confidence in the statement of Mr. Hitchcock; yet it is proper here to remark, that from his account of her, and though awarded a premium as a native animal, she partakes highly of the blood of the Short-Horns. In the two classes of animals entered as of *native and foreign origin*, it is obvious that a proper discrimination was not made; for in some of the former there is evidently more of the blood of distinct imported races than the latter. Yet your committee deemed it their duty to award the premiums of the society to the two classes as they found them.

Now here it is, most everywhere that our native cows are found excelling as milkers, we can trace a portion of their blood, (usually the greatest share,) to the Durhams, and yet there are those who are constantly decrying the Short-Horns for not being *milkers*. Verily a few particular people are very hard to be convinced. It is our intention hereafter to make up a table of the milking qualities of the Short-Horns and their grades, and any one possessing information upon this subject, we shall be glad by their communicating the same to us. Mr. Paoli Lathrop of South Hadley took the first premiums on Durham bulls and heifers. Mr. Ira Fenton of Belchertown on Durham cows. Mr. Sumner Chapin of Springfield, the first premiums on Fat Cattle and Working-Oxen.

SALE OF RAMBOUILLET MERINOS.—Mr. Nathaniel Hart, Jr., of Kentucky, has just passed through this city on his way home, having in company with him three Rambouillet Merino bucks, purchased of Mr. D. C. Collins of Hartford, Connecticut. Mr. Hart has kept a large flock of the old-fashioned Merinos for some time, on his plantation at Versailles, Woodford county, and has purchased these fine bucks, as the best animals which could be found, for the purpose of making improvements upon them. Kentucky will have in these Rambouillets a valuable addition to her sheep stock, and we recommend their produce in advance, to the breeders of the western country. We understand Mr. Collins has recently met with a great demand for his sheep, and that he has now disposed of all he has to spare this year. We congratulate him upon it, and take some credit to ourselves, for calling public attention to his very valuable imported flock.

SHEEP-DOGS.—The price of a well-broke sheep-dog is $25 to $30. They ought always to be accompanied by their shepherds, as they are taught to manage sheep in a peculiar way, which none but regularly-bred shepherds understand.

ANNUAL MEETING OF THE N. Y. STATE AGRICULTURAL SOCIETY.—The annual meeting of the New York State Agricultural Society, will be held at the Society's room in the Old State Hall, Albany, on the 3d Wednesday, (the 17th,) of January, 1844, at 10 o'clock, A. M.

Persons intending to compete for the Society's premiums on field-crops, essays, &c, are reminded that their statements and essays must be sent to the Recording Secretary, Albany, before the first of January.

Presidents of County Agricultural Societies are also requested to transmit the reports required by the statute, to the Recording Secretary, previous to the annual meeting.

LUTHER TUCKER, Rec. Sec'y.

LIST OF PREMIUMS

Of the American Institute.—Continued.

FLOWERS.

William Kent, Brooklyn, L. I., for superior dahlias, including some extra-fine American seedlings—gold medal.

George C. Thorburn, 15 John street, N. Y., for a rich display of dahlias—gold medal.

Daniel Boll, Bloomingdale, N. Y., for a fine assortment of dahlias, including some fine American seedlings—silver medal.

Thomas Hogg & Sons, 79th street, N. Y., for a good assortment of dahlias—Mrs. Loudon's Flower Garden.

William R. Prince, Flushing, L. I., for numerous varieties of dahlias—Downing's Rural Architecture.

Thomas Addis Emmet, Mount Vernon, N. Y.—T. Cremmins, gardener—for a superior display of dahlias—Downing's Cottage Architecture.

William Phelan & Sons, 5th street, N. Y., for a fine display of dahlias—Hovey's Magazine.

William Reid, 34th street and 4th avenue, N. Y., for an excellent assortment of dahlias—Bridgeman's Gardeners' Assistant.

William Laird, 17th street, N. Y., for an ornamental frame, decorated with flowers—Hovey's Magazine.

James L. L. F. Warren, Brighton, Mass., for a beautiful bouquet of flowers—silver medal.

Mrs. Jeremiah Brown, Brooklyn, L. I., for a beautiful vase of flowers—Mrs. Loudon's Flower Garden.

J. B. Mantel, 46th street, N. Y., for an ornamental frame, decorated with flowers—American Flower-Garden Directory.

Daniel Boll, Bloomingdale, N. Y., for numerous varieties of the rose, and other rare flowers—Mrs. Loudon's Flower Garden.

Samuel M. Cox, Bloomingdale road, N. Y., for a beautiful stand of flowers—American Flower-Garden Directory.

William Beekman, 110 Ninth street, N. Y., for a fine supply of dahlias—Hovey's Magazine.

Isaac Buchanan, 29th street, N. Y., for two vases of rare flowers—1 Vol. of American Agriculturist.

To Alfred Bridgeman, J. Boyce, A. P. Cummings, William Davison, J. Ettringham, William V. Legget, Mrs. McFarlane, George Maine, William Ross, Samuel Ruth, Grant Thorburn, Jr., L. Van Wyck, Edward White, and John W. Wood, for supplies of flowers for ornamenting the Horticultural room, to each a copy of the Report of the American Institute, on the subject of Agriculture.

VEGETABLES.

Robert L. Pell, Pelham, Ulster co., N. Y., for the choicest assortment of culinary vegetables — silver medal.

John Beekman, 61st street, N. Y., for the best and greatest variety of vegetable roots for cattle—silver medal.

Joseph Clowes, Harsimus, N. J., for twelve superior blood beets—United States Farmer.

Robert L. Pell, Pelham, Ulster co., N. Y., for twelve superior sugar beets—1 vol. American Agriculturist.

John Beekman, 61st street, N. Y., for twelve superior mangel-wurtzel beets—1 vol. of the Cultivator.

Christopher Allen, Staten Island, N. Y., for six fine heads of cauliflower—Buel's Farmers' Companion.

Peter Hulst, gardener to Lambert Wyckoff, Bushwick, L. I., for the best field of cabbage—silver medal.

L. Wyckoff, Bushwick, for twelve large heads of the drum-head cabbage—Transactions of the State Agricultural Society.

Thomas Bridgeman, Jr., Dutch Kills, L. I., for twelve fine heads of Savoy cabbage—Faulkner's Farmers' Manual.

Thomas Prosser, Paterson, N. J., for twelve superior carrots for the table—United States Farmer.

J. Clowes, Harsimus, N. J. for twelve fine roots of white celery—Transactions of State Agricultural Society.

Frederick Bonnicamp, Harsimus, N. J., for twelve fine roots of red celery—Dana's Muck Manual.

Robert L. Pell, Pelham, Ulster co., N. Y., for six large egg-plants—Bridgeman's Gardeners' Assistant.

John Brill, Jersey city, N. J., for a peck of superior yellow onions—Faulkner's Farmers' Manual.

William Ross, Ravenswood, Queens co., N. Y., for a peck of superior red onions—Smith's Productive Farming.

Joseph Clowes, Harsimus, N. J., for twelve fine parsneps for the table—American Agriculturist.

J. Beekman, 61st street, N. Y., for twelve large parsneps for cattle—United States Farmer.

Alexander Walsh, Lansingburgh, for superior seedling potatoes—Bridgeman's Gardeners' Assistant.

T. B. Wakeman, Bergen, N. J., for superior Mercer potatoes—silver medal.

William J. Townsend, Newtown, Queens co., for a superior lot of table potatoes—Bridgeman's Gardeners' Assistant.

S. B. Townsend, Newtown, L. I., for three large cattle pumpkins—Buel's Farmers' Companion.

R. L. Colt, Paterson, N. J., for a peck of superior potatoes for cattle—1 vol. of Cultivator.

John P. Haff, Yorkville, N. Y., for a peck of superior white flat turneps—1 vol. of Cultivator.

Peter Wyckoff, Bushwick, Kings co., for twelve superior roots of long white turneps—Bridgeman's Gardener's Assistant.

S. Pabor, Harlem, N. Y., for superior cream pumpkins—Smith's Productive Farming.

F. O. Wakeman, Bergen, N. J., for twelve superior roots of salsify—American Agriculturist.

John Brill, Harsimus, N. J., for three fine winter squashes—Faulkner's Farmers' Manual.

John A. Miller, Little Falls, N. J., for a fine large Valparaiso squash—Dana's Muck Manual.

H. W. Tibbets, Yonkers, N. Y., for half a peck of large tomatoes—United States Farmer.

Robert L. Pell, Pelham, Ulster co., for a fine sample of hops—American Agriculturist.

Robert L. Pell, Pelham, N. Y., for superior specimens of sweet potatoes—diploma.

P. Hegone, 206 Greenwich street, for superior specimens of pickles and catsup—diploma.

FRUITS.

R. L. Pell, Pelham, Ulster co., N. Y., for the best fruit farm—gold medal.

R. T. Underhill, Croton Point, N. Y., for successful vineyard-culture of the native grape—silver medal.

J. L. L. F. Warren, Brighton, Mass., for twelve superior table apples — Bridgeman's Gardeners' Assistant.

R. L. Pell, Pelham, Ulster co., N. Y., for twelve superior winter apples—Kenrick's American Orchardist.

T. H. Perkins, Brookline, Mass., for twelve superior varieties of house-grapes—gold medal.

R. S. Field, Princeton, N. J., for three superior varieties of house-grapes—silver medal.

J. F. Allen, Salem, Mass., for six varieties of superior house-grapes—Downing's Cottage Architecture.

Rev. Dr. Wm. Patton, 110 Sullivan street, N. Y., for fifty-two superior bunches of Isabella grapes—Downing's Rural Architecture.

R. T. Underhill, Croton Point, N. Y., for superior specimens of Catawba grapes—Kenrick's American Orchardist.

J. L. L. F. Warren, Brighton, Mass., for twelve superior peaches (freestone)—Kenrick's American Orchardist.

John J. Van Wyck, 140 Twenty-first street, N. Y., for twelve superior peaches (clingstones)—Bridgeman's Gardeners' Assistant.

M. P. Wilder, Dorchester, Mass., for sixty-five choice varieties of pears—silver medal.

George C. DeKay, 25th street, Seventh avenue, N. Y., for a superior lot of table pears—Kenrick's American Orchardist.

D. Henderson, Jersey City, N. J., for twelve fine magnum-bonum plums—Buel's Farmers' Companion.

C. M. Graham, Jr., Content, Harlem lane, N. Y., for fifty-five quinces gathered from one tree—Kenrick's American Orchardist.

Jacob Hendrer, Glenham, Dutchess co., N. Y., for fine specimens of grapes—Bridgeman's Gardeners' Assistant.

J. W. Hayes, Newark, N. J., for a lot of grapes and fine pears—Farmers' Companion.

John Couzens, Dobb's Ferry, Westchester co., N. Y., for superior specimen of grapes—United States Farmer.

Wm. R. Prince, Flushing, L. I., for two bunches of native grapes, and fine specimen of apples—Hovey's Magazine.

William Reid, 37th street, 4th avenue, for a fine collection of pears and apples—American Agriculturist.

Charles M. Graham, Jr., Content, Harlem lane, for a fine lot of Isabella grapes—Transactions of State Agricultural Society.

J. J. Morris, Batavia, N. Y., for fine specimen of pears—Farmers' Manual.

Nicholas Wyckoff, Jr., Bushwick, for fine specimens Isabella grapes—The Planters' Guide.

J. B. Mantel, 46th street, N. Y., for 53 varieties of pears and other fruit—two vols. of the Transactions of the State Agricultural Society.

Joseph L. Franklin, Flushing, L. I., for twelve extra large apples—Dana's Muck Manual.

H. & L. Hotchkiss, New Haven, Conn., for one pear weighing 33 oz.—1 vol. of the Cultivator.

Samuel Walker, Roxbury, Mass., for superior varieties of pears—silver medal.

Henry Steel, Jersey City, N. J., for a lot of extra-fine early grapes—Bridgeman's Gardeners' Assistant.

Miss Louisa Bennett, L. I., for a basket of native strawberries—Bridgeman's Florist's Guide.

MAKING CAPONS.

THE following article on making capons, is the best within our recollection. It is taken from the directions accompanying the sets of instruments for caponising, made by Mr. John Mendenhall, Philadelphia:—

FOWLS intended to be cut, must be kept at least twenty-four hours without food, otherwise the entrails will fill the cavity of the belly and render it almost impossible to complete the operation; besides, when they have been starved the proper length of time, they are less liable to bleed.

The chicken is taken at any age, from five days old until it begins to crow, or even after. Lay the fowl on its left side on the floor, draw the wings back, and keep it firm by resting the right foot on its legs, and the other foot or knee on its wings. (The table with the apparatus does away with the necessity of this stooping position.) Be careful that the head of the fowl is not held down, or even touched during the operation, as it would be sure to cause it to bleed. Pluck the feathers off from its right side near the hip joint, in a line between that and the shoulder joint; the space uncovered should be a little more than an inch square. Make an incision between the two last ribs, having first drawn the skin of the part backward, so that when left to itself it will cover the wound in the flesh. In some fowls the thigh is so far forward that it covers the two last ribs; in which case, care must be taken to draw the flesh of the thigh well back, so as not to cut through it, or else it would lame the fowl, and perhaps cause its death in a few days after the operation, by inflaming.

The ribs are to be kept open by the hooks—the opening must be enlarged each way by the knife, if necessary, until the testicles, which are attached to the back bone, are entirely exposed to view, together with the intestines in contact with them. The testicles are enclosed in a thin skin, connecting them with the back and sides—this must be laid hold of with the pliers, and then torn away with the pointed instrument; doing it first on the upper testicle, then on the lower. (The lower testicle will generally be found a little behind the other—that is, a little nearer the rump.) Next introduce the loop; (which is made of a horse-hair or a fibre of cocoa-nut;) it must be put round the testicle which is uppermost, in doing which the spoon is serviceable to raise up the testicle and push the loop under it, so that it shall be brought to act upon the part which holds the testicle to the back; then tear it off by pushing the tube toward the rump of the fowl, at the same time drawing the loop. Then scoop it and the blood out with the spoon, and perform the same operation on the other testicle. Take away the hooks, draw the skin over and close the wound; stick the feathers that you pulled off before on the wound, and let the bird go.

REMARKS.—If the operation be performed without sufficient skill, many of the fowls will prove not to be capons; these may be killed for use as soon as the head begins to grow large and get red, and they begin to chase the hens. The real capon will make itself known by the head remaining small, and the comb small and withered; the feathers of the neck or mane will also get longer, and the tail will be handsomer and longer: they should be kept to the age of fifteen or eighteen months, which will bring them in the spring and summer, when poultry is scarce and brings a high price. Take care, however, not to kill them near moulting time, as all poultry then is very inferior. The operation fails, principally, by bursting the testicle, so that the skin which encloses the soft matter, remains in the bird, and the testicle grows again.

Birds of five or six months are less liable to have the testicles burst in the operation than younger fowls, but they are also more apt to bleed to death than those of from two to four months old.

A skilful operator will always choose fowls of from two to three months;—he will prefer also, to take off the lower testicle first, as then the blood will not prevent him from proceeding with the other; whereas, when the upper one is taken off the first, if there should be any bleeding, he has to wait before he can take off the lower testicle.

The large vein that supplies the entrails with blood passes in the neighborhood of the testicles; there is danger that a young beginner may pierce it with the pointed instrument in taking off the skin of the *lower* testicle, in which case the chicken would die instantly, for all the blood in its body would issue out. There are one or two smaller veins which must be avoided, which is very easy, as they are not difficult to see. If properly managed, no blood ever appears until a testicle is taken off: so that should any appear before that, the operator will know that he has done something wrong.

If a chicken die, it is during the operation by bleeding; (of course it is as proper for use as if bled to death by having its throat cut;) they very seldom die after, unless they have received some internal injury, or the flesh of the thigh has been cut through, from not being drawn back from off the last two ribs, where the incision is made; all of which are apt to be the case with young practitioners.

If the testicles be found to be large, the bamboo tube should be used, and it should have a strong cocoa-nut string in it,—for small ones the silver tube with a horse-hair in it, is best.

When a chicken has been cut, it is necessary before letting it run, to put a permanent mark upon it; otherwise it would be impossible to distinguish it from others not cut. I have been accustomed to cut off the outside or the inside toe of the left foot,—by this means I can distinguish them at a distance. Another mode is to cut off the comb, then shave off the spurs close to the leg, and stick them upon the bleeding head, where they will grow and become ornamental in the shape of a pair of horns. This last mode is perhaps the best, but it is not so simple and ready as the first. Which ever mode is adopted, the fowl should be marked before performing the operation, because the loss of blood occasioned by cutting off the comb or a toe, makes the fowl less likely to bleed internally during the operation.

It is very common, soon after the operation, for the chicken to get wind in the side, when the wound is healing, between the flesh and the skin; it must be relieved by making a small incision in the skin, which will let the wind escape.

Those fowls make the finest capons which are hatched early in the spring; they can be cut before the hot weather comes, which is a great advantage.

Never attempt to cut a full-grown cock; it is a useless and cruel piece of curiosity. I have never known one to live.

Be not discouraged with the first difficulties; with practice they will disappear; every season you will find yourself more expert, until the cutting of a dozen fowls before breakfast will be a small matter.

It may be well to give a warning against becoming dissatisfied with the tools. A raw hand, when he meets with difficulties, is apt to think the tools are in fault, and sets about to improve them and invent others; but it is only himself that lacks skill, which practice alone can give. I have spent money, besides wasting my time in this foolish notion, but have always found that the old, original tools, which came from China, and where this mode of operating was invented, are the best.

Take care that the tools are not abused by ignorant persons attempting to use them; they will last a person's life-time if properly used; but if put out of order, none but a surgical instrument maker can repair them properly.

The object in giving publicity to this, is to have the markets of Philadelphia well supplied with capons: they have ever been esteemed one of the greatest delicacies, preserving the flavor and tenderness of the chicken, with the juicy maturity of age. In the Paris and London markets, double the price of common poultry is obtained for capons.

Considering the abundance and excellence of poultry in the United States, it seems surprising that the art of making capons should be almost entirely unknown—it is hoped that this deficiency will now be supplied.

GRAFTING AND BUDDING.

For what follows on grafting and budding, we are indebted to that excellent family paper, the New World. The article was prepared for it by J. S. Skinner, Esq., of the Post Office Department, Washington, from an English work, which, he adds, "is not published or much known in this country."

Grafting.—The process of grafting consists in taking off a shoot from one tree, and inserting it into another, in such a manner as that both may unite closely, and become one tree; the shoot or cutting thus employed is called a *scion*, and the tree on which it is inserted or grafted, a stock. The process of budding has precisely the same object in view as that of grafting, differing from the latter process only in the insertion of a bud, instead of a shoot or cutting, into the bark of another tree. To execute either process with adroitness and success, considerable practice is required. To excel in either, instructions should be received from some competent person, who is both willing and able to impart the necessary information. More knowledge can be acquired in a short time in this manner than can possibly be attained by the most attentive perusal of any treatise expressly written upon the subject. Impressed with the difficulty of the task, many writers have indeed asserted, that description alone must ever fail to convey an adequate knowledge of the process; but the intelligent author of the English Gardener has, with his usual ability, treated the subject in so clear and comprehensive a manner that we are induced to give the details of the process in the author's own language.

Before entering upon the subject of grafting and budding, there is one thing which is equally applicable to both processes, and that is, that the *stock* ought to stand the whole summer upon the spot where it is grafted, before that operation is performed upon it. If stocks be planted out in the fall, the sap does not rise vigorously enough in the spring to afford a fair chance to the growing of the graft; another remark of equal importance is, that fruit-trees stand only *one summer* on the spot whence they are to be removed to their final destination; because, if they stand longer than this, they will have large and long roots, great amputation must take place, and the trees suffer exceedingly.

The Time of Grafting is generally from the beginning of February to the end of March,[*] beginning with the earliest sorts of trees, as plums, cherries, and pears; and ending with the latest, as apples. But seasons are different, and in a backward season, the season for grafting will be backward; and in such case, the fulness and bursting appearance of the buds of the stocks, and the mildness of the weather must be our guides. However, it is certain that the mild weather, with occasional showers, is the best time for grafting.

The Mode of Preparing the Scion comes next. Take from the tree from which you mean to propagate, as many branches of last year's wood as will cut into the quantity of scions that you want; but in choosing what branches to take, let the vigor of the tree guide you, in some measure. If it be a healthy, flourishing, and young tree, take your branches from the outside shoots, for the upright ones at the top, or those near the middle, are more likely to produce wood than fruit. Yet do not take branches from the very lowest part of the tree, if you can avoid it, as these are sure to be more puling in their nature. In case the tree be old or weakly, then choose the most vigorous of its last year's shoots, no matter where they grow. Keep these branches uncut until you arrive at the season for grafting, keeping them, in the meanwhile, buried in dry mould; and when that season arrives, take them up and cut them into the proper lengths for grafting. The middle part of each branch will generally be found to be the best; but your branches may be scarce and few in number, and then make use of every part. Each scion should have from three to six eyes on it, but six will, in all cases, be quite enough, as there is no use in an extraordinary length of scion; but, on the contrary, it may be productive of much mischief, by overloading the head with young shoots and leaves as summer advances, and thereby making it more subject to accident from high winds or heavy rains.

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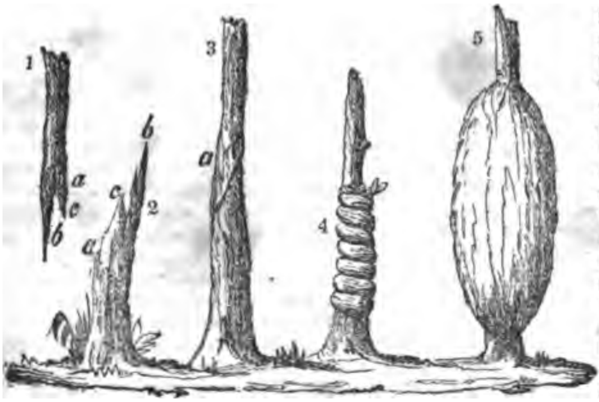
[*] In this climate, April and May are the best months. —Ed. Am. Ag.

The Operation of Grafting is performed many ways, though none of them differs from any of the others in the *main principle*, which is that of bringing the under or inner bark of the scion to bear upon the same bark of the stock. The sap of the stock flows upward toward the scion, and it will flow on into the scion, provided it find no interruption. Here, therefore, is the nicety—to fit those two barks so closely, the one upon the other, that the sap shall proceed onward into the scion, just as it would have done into the amputated branch, causing the scion to supplant the branch. I shall only mention and illustrate two modes of grafting, viz., *tongue-grafting* and *cleft-grafting*. These two it is necessary for me to speak of separately, and thoroughly to describe, for they are not both of them applicable in all cases; the former being used in grafting on small-sized stocks and small branches of trees, and the latter on large stocks and large branches.

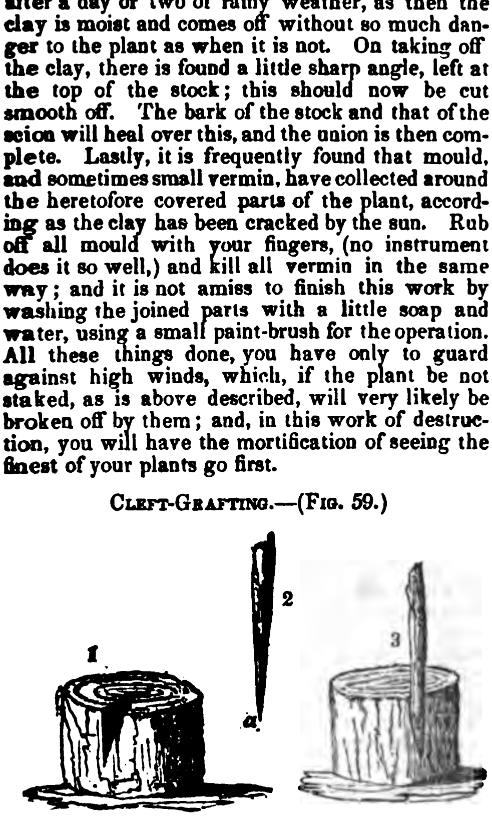
TONGUE-GRAFTING.—(FIG. 58.)



Tongue-Grafting.—Suppose you have your stock of the proper age for grafting, you cut it off at three or four inches from the ground, and with a very *sharp, straight, and narrow-bladed grafting-knife*, cut a thin strip of bark and wood upward, from about two inches below your already shortened stock. Make this cut at one pull of the knife, inserting the edge rather horizontally, and when it has gone through the bark and into the wood a little short of the middle, pull straight upward, (2, *a*, *b*;) then at rather less than half way down this cut, and with the blade of your knife across the cut, and downward, cut a very *thin tongue* of not more than three eighths of an inch long, (2, *c*.) Proceed nearly in the same way with the bottom part of the scion; cut first a narrow strip of wood and bark out, but not putting the knife in horizontally, as you have done with regard to the stock, (at 2, *a*,) nor bringing it out straight to the end, to make a shoulder or angle, as you have done at (2, *a b*;) but make a sloping cut (1, *a b*,) of about the same length as the cut in the stock, or rather a little less if anything; then make a tongue (1, *c*) to correspond with that of the stock, but recollect that this must be cut *upward* instead of *downward*; then place the scion upon the stock, inserting the tongue of the scion into the tongue of the stock. Bring the four edges of bark, that is, the two edges of the cut in the top of the stock, and the two corresponding edges of the cut in the bottom of the scion, to meet precisely; or, if the scion be, in diameter, a smaller piece of wood than the stock, so that its two edges of bark can not both meet those of the stock, then let only one meet, but be sure that one meets precisely. But observe, that this can never be unless the first cut in the stock and that in the scion (2, *a b*,) and (1, *a b*,) be as even as a die, and performed with a knife scarcely less sharp than a razor. Take a common pruning-knife, and attempt to make a cut of this kind, and you will find when you come to fit the scion on, that, squeeze them them together as you may, you will, in most cases, see light between the parts of the stock and the scion that you are trying to join, so effectually, as that the sap shall flow out of the one into the other, unconscious of any division at all! But I will not suppose anybody so ungain (as it is called in Hampshire) as to go about so nice an operation as this without being prepared with the proper instruments for performing it; and therefore, I now suppose the scion put on properly, and presenting the appearance as in (3, *a*.) But this is not all; the operation is not yet complete. The two parts thus joined must be bound closely to one another with matting, or bass, as the gardeners call it, (4.) A single piece tied on to the stock, will, if well done, almost insure the junction; but lest parching winds should come and rip up all vegetation, it is usual to put on besides the bandage of matting, a ball of well-beaten clay sprinkled over with a little wood-ashes or the fine siftings of cinders, to cover completely the parts grafted, that is, from an inch below them to an inch or so above them, (5;) and, even to prevent this ball of clay from being washed off by heavy rains, it is well to tie around it a covering of coarse canvass, or else to earth up the whole plant as you do beans or peas, drawing a little mound around it so as to reach nearly the top of the clay. Mr. Harrison prepares his grafting clay in the following manner: Take two parts of clay and one of horse-dung, free from straw, mix them together, and beat the mass until the whole is thoroughly incorporated, then temper it with a little water till it is reduced to the consistence of stiff paste. This composition *never cracks* on drying!

Future Treatment.—Something now remains to be said on the future treatment of the grafted plant. In a month's time at least, you will see whether the scion has taken; it will then be either bursting forth into leaf or be irrecoverably dead. In this latter case, take off immediately the canvass, clay, bandage, and dead scion, and let the stock push forth what shoots it pleases, and recover itself. In the former case, however, you must, as soon as the scion is putting forth shoots, cut off, or rub off, all shoots proceeding from the stock between the ground and the clay, as these, if suffered to push on, would divert the sap away from the scion, and probably starve it; then carefully stake the plant, that is, put a small stick into the ground at within three inches, or thereabouts, of the root, and long enough to reach a few inches above the scion, which you will tie to it slightly with a piece of wetted matting. This is really necessary, for when the shoots proceeding from the scion become half a foot long, they, with the aid of their leaves, become so heavy as, when blown to and fro by the wind, to break off immediately above the clay, or become loosened down at the part joined to the stock. The staking being done, you need do nothing more till near the end of June, when you should take off the whole mass of canvass, clay, and bandage, but be careful in taking off the clay not to break off the plant at the junction. It should be done by a careful hand, and after a day or two of rainy weather, as then the clay is moist and comes off without so much danger to the plant as when it is not. On taking off the clay, there is found a little sharp angle, left at the top of the stock; this should now be cut smooth off. The bark of the stock and that of the scion will heal over this, and the union is then complete. Lastly, it is frequently found that mould, and sometimes small vermin, have collected around the heretofore covered parts of the plant, according as the clay has been cracked by the sun. Rub off all mould with your fingers, (no instrument does it so well,) and kill all vermin in the same way; and it is not amiss to finish this work by washing the joined parts with a little soap and water, using a small paint-brush for the operation. All these things done, you have only to guard against high winds, which, if the plant be not staked, as is above described, will very likely be broken off by them; and, in this work of destruction, you will have the mortification of seeing the finest of your plants go first.

CLEFT-GRAFTING.—(FIG. 59.)



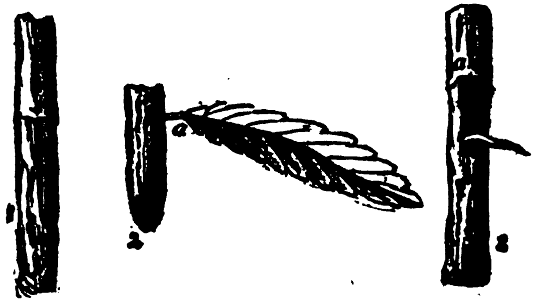
Cleft-Grafting.—This is a species of grafting adopted in cases where the stock is large, or where it consists of a branch or branches of a tree headed down. In either of these cases, saw off horizontally, the part you wish to graft, and smooth the wound over with a carpenter's plane, or a sharp, long-blade knife, (1.)

Prepare your scion in this manner: At about an inch and a half from the bottom, cut it in the form of the blade of a razor; that is, make it sharp on one side, and let it be blunt at the back, where you will also take care to leave the bark whole, (2, *a*.) Having thus prepared the scion, make a split (1) in the crown of the saw-cut downward for about two inches, taking care that the two sides of this be perfectly even. Hold it then open, by means of a chisel or a wedge, (or when the stock is but a small one, your knife,) and insert the scion, the sharp edge going inward, and the bark side or razor-back remaining outward, so that, on taking out the wedge or chisel, the cleft closes firmly on the scion, (3,) the two edges of bark formed by the cleft, squeezing exactly upon the two edges of bark formed by the blunt razor-back. To make the two barks meet precisely is the only nicety in this operation; but this is so essential, that the slightest deviation will defeat the purpose. In this sort of grafting, the stock on which you graft is generally strong enough to hold the scion close enough within its cleft, without the aid of binding, and then it is better not to bind; but as it is also necessary to prevent air circulating within the wounded parts both of the stock and the scion, use grafting-clay to cover them over so as to effectually exclude the air; and cover the clay with a piece of coarse canvass, wetting it first, and then binding it on securely. In this way, the stock being strong, you may insert several scions on the same head, by making several different clefts, and putting one scion in each; but this can only be to insure your having two to succeed, for if all the scions that you put on one head take, you must choose the two most eligible, and sacrifice the rest, as more than two leading limbs from such head ought not to be encouraged. The season for performing this sort of grafting, and the mode of preparing the scion, and the future treatment of the tree, are precisely the same as in *tongue-grafting.*

Crown, or Bark-Grafting is a very ready method of grafting upon large, uneven, old stocks and branches. It is practised somewhat later than the methods above described, that is, from the end of March to the third week in April, because, in that period, the separation of the bark from the wood is more easily affected; a circumstance of primary importance in this case. The tree is to be headed down, the cut being made horizontally, and the section bored quite even and smooth; then make a slit in the bark two inches in length, next with the handle of a budding-knife, carefully open the bark for about a quarter of an inch; then cut the scion about two inches in a sloping direction, in the form of a tongue, leaving the bark entire on the outside. The scion thus prepared, is pressed downward between the bark and the wood as far as the incision in the stock extends; the bark of the stock readily yields to the pressure employed, and the scion is supported in its situation by a few coils of bass-matting, the whole being surrounded by clay.

Dove-Tail Grafting.—This is a very neat and successful mode of grafting, originating with Mr. Malone, who gives the following directions for its performance. The scion is to be selected so as to have two or three buds above where the knife is to be inserted to prepare it for the operation; a slip is cut off the end of the scion, sloping it to the bottom as long as it may be decided to insert it into the stock. On each side of the cut, as far as it extends, a part of the bark is to be taken off, leaving the under part broader than the upper, on which upper or back part always contrive to leave a bud. The stock or branch to be worked is thus prepared: Being first cut off smooth and straight, two parallel slits, distant from each other nearly the width of the scion and the length of its cut part, are then made in the bark of the branch, observing particularly to slope the knife, so that the under edge of the cut next the wood may be wider than the outer edge. The piece of bark between the slits must then be taken out, separating at the bottom by a horizontal cut. The scion will then slide into the dove-tail groove thus formed, and, if the work is well performed, will fit neatly and tightly. A small quantity of the grafting-clay must then be carefully applied, securing it on with list, or any other convenient bandage, fastening it at the end with two small nails. The top of the stock should be entirely covered with clay, sloping it well up to the grafts, and should be examined often to see if any cracks or openings appear, which should be immediately filled up with some very soft clay. The proper time for performing the operation is from the beginning of April till the middle of May, or earlier if the sap is in motion. (Gardener's Magazine, Vol. VII.)

Budding.—(Fig. 60.)



Budding.—Budding is performed for precisely the same purpose as grafting, and, like grafting, it is performed in many different ways; and as long experience has ascertained the best method, namely, that of T budding, (1,) so called from the form of the two cuts that are made in the bark of the stock to receive the bud, or *shield-budding*, as it is sometimes called from the form of the piece of bark (2) on which the bud is seated, assuming the shape of a shield when it is prepared to be inserted within the T cut in the stock.

The only solid difference between budding and grafting is this, that whereas in grafting you insert on the stock a *branch* already produced, in budding, you insert only the *bud*. I shall proceed, in treating of this matter, in the same way that I did in the preceding article, namely, *as to the season proper for budding, the choosing and preparing of the bud, the operation of budding, and the future treatment of the plant budded.*

The Season for Budding is generally from the latter end of July to the latter end of August, the criterions being a plump appearance of the buds formed on the spring shoot of the same year, seated in the angle of a leaf, and a readiness in the bark of the stock to separate from the wood.

In Choosing and Preparing the Bud, fix on one seated at about the middle of a healthy shoot of the mid-summer growth—these are, generally speaking, the most inclined to fruitfulness. Choose a cloudy day, if you have a choice of days at this season, and if not, perform your work early in the morning, or in the evening. The time being proper, you sever the branch on which you find the buds to your liking. Take this with you to the stock that you are going to bud, holding the branch in your left hand, the largest end downward; make a sloping cut from about an inch and a half below the bud to about an inch above it, suffering your knife to go through the bark, and about half way into the wood, cutting out wood and all. This keeping of the wood prevents the bud and its bark from drying while you are preparing the incision in the stock, and if you wish to carry buds of scarce sorts to any distance, you may do so safely by putting their ends in water, or in damp moss, but it is always safer, as well in grafting as in budding, to perform the operation with as much expedition as possible, but particularly it is so in budding.

Operation of Budding.—Cut off the leaf under which the bud is situated, but leave its foot-stalk, (2, *a*,) and by this hold it between your lips, while with your budding-knife you cut two straight lines in the stock at the place where you wish to insert the bud, and this should be where the bark is smooth, free from any bruises or knots, and on the side rather from the mid-day suns. Of these lines let the first be horizontal, (1,) and let the next be longitudinal, beginning at the middle of the first cut and coming downward. Let them, in short, describe the two principal bars of the Roman letter T. You have now to take out from the bark on which the bud is, the piece of wood on which the bark is, and which has served you, up to this time, to preserve the bud and bark from drying and shrinking. But this is a nice matter. In doing it you must be careful not to endanger the root of the bud, as it is called, because in that is its existence. The bark, (if the season be proper for budding,) will easily detach itself from this piece of wood, but still it requires a very careful handling to get it out without endangering the root of the bud. Hold the bud on your fore-finger, and keep your thumb on the wood opposite; then with the fore-finger and thumb of the other hand, bend backward and forward the lower end of the shield, and thus coax the wood to disengage itself from the bark; and when you find it decidedly doing so, remove your thumb from it, and the whole piece of wood will come out, leaving you nothing but a piece of bark of about two and a half inches long, with a bud and foot-stalk of a leaf on it. If the root of the bud be carried away with the piece of wood, you will perceive a small cavity where it ought to be. In this case, throw away the bud and try another.

Having succeeded in the second attempt, now open the two sides of the longitudinal bar of the T with the ivory haft of your budding-knife, but in doing this, raise the bark clearly down to the wood, for the inside of the piece of bark belonging to the bud must be placed directly against this. Having opened these sides wide enough to receive the longest end of the bark, insert it nicely, taking especial care that its inner side be flatly against the wood of the stock. Then cut the upper end of the bark off, so that its edge shall meet precisely the edge of the horizontal bar of the T (3, *a*.) With your finger and thumb bring the two sides of the longitudinal bar over the bark of the bud, or rather the shield, and with a piece of well-soaked matting, begin an inch below this bar and bind firmly all the way up to an inch above the horizontal bar, taking good care to leave the bud peeping out. Bind in such a way as to exclude the air, for that is the intent of binding in this case. Tie your piece of matting on first, and wind it round and round the stock as you would a riband, taking care not to twist the matting; wind it slowly, and every time you have gone completely round, give a gentle pull to make it firm.

Future Treatment.—In a fortnight's time from the operation, you will discover whether the bud has taken, by its roundness and healthy look; and, in a fortnight after that, loosen the bandage to allow the plant to swell, and in about five weeks from the time of budding, take away the bandage altogether. In this state, the plant passes the winter, and just as the sap begins to be in motion in the following spring, you head down the stock at about an inch above the bud, beginning behind it, and making a sloping cut upward to end above its point. Some gardeners leave a piece of the stock about six inches long for the first year, in order to tie the first summer's shoot to it to prevent its being broken off by the wind. This may be well when the plant is exposed to high winds, but even then, if you see danger, you may tie a short stick on the top part of the stock, and to this tie the young shoot, and then the sap all goes into the shoot from the bud, instead of being divided between it and six inches of stock left in the other way. There are some advantages which budding has over grafting, and these I think it right to mention. In the first place, universal experience has proved that certain trees succeed much better when budded, than the same trees do when grafted, such are the peach, nectarine, apricot, plum, and cherry; indeed, the rule is, that all stone-fruits do better budded than grafted, that they are, when budded, less given to gum, a disease peculiar to stone-fruits, and often very pernicious to them. You may also, by budding, put two more branches upon a stock that would be too weak to take so many grafts, and you may bud in July when grafting has failed in March and April. The disadvantage of budding is that the trees are rendered one year later in coming into bearing than when you graft.

Mr. Knight has recommended a mode of budding, (Hort. Trans., vol. I.) He thus describes the process: In the month of June, as the luxuriant shoots of my peach-trees were grown sufficiently firm to permit the operation, I inserted buds of other varieties into them, employing two distinct ligatures to bind the buds in their places. One ligature was first placed above the bud inserted, and upon the transverse section through the bark; the other which had no further office than that of securing the bud, was applied in the usual way. As soon as the buds had attached themselves, the ligatures last applied were taken off, but the others were suffered to remain. The passage of the sap upward, was in consequence much obstructed, and the inserted bud began to vegetate strongly in July, and when these had afforded shoots about four inches long, the remaining ligatures were taken off to admit the excess of sap to pass on, and the young shoots were nailed to the wall, being there properly exposed to light, their wood ripened well, and afforded blossoms in the succeeding spring.

We should be pleased if any of our readers could give us further information about the shrub described below.

From the Yankee Blade.

HIGH CRANBERRY.

A gentleman of this place having occasion some twenty years ago, to make an excursion into the northern part of the state, near Lake Umbagog, where the Magalloway empties into the Androscoggin, passed through a large piece of low land, comprising many acres, which was covered with the high cranberry as far as the eye could see, exhibiting the most beautiful and splendid appearance, perhaps, ever displayed from any of the spontaneous productions of the forests of New England. He says that some shrubs which had acquired the magnitude of trees of several inches diameter, were literally bent to the ground, under the weight of their luxuriant fruit; and such was their abundance, that a single individual might have gathered more than thirty bushels in a day.

The high cranberry in dense forests, sometimes acquires the respectable altitude of 15 or 20 feet; but in more open places, its height is generally from 6 to 8 or 10 feet. Its stem and leaf very much resemble those of the snow-ball; and the flower, while it lasts, is but little inferior in elegance and beauty to the flower of that highly ornamented and much esteemed shrub. The fruit is smaller than that of the running cranberry, of a bright red color when ripe, and grows in large, flat clusters on the ends of the branches. Its taste is very acid, and rather austere. It contains a large, hard, flat seed, which is an objection to the use of it without sifting or straining; but being sifted or strained after stewing, it is excellent for sauce, pies, and tarts. Prepared with sugar, in the usual way, it makes a most delicious jelly.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

FINE WOOL SHEEP.

Buskirk's Bridge, October, 1843.

I HAVE read the article headed "Sheep, Paular Merinos," over the signature of Examiner, in the May number, page 52 of your paper, purporting to give us plain farmers an insight into sheep breeding, &c.; and what fine flocks used to be, when the "old fashioned Merino sheep" were in their "glory." What they were a quarter of a century ago, I cannot say, that was before I had any thing to do with sheep in this country; but I presume that *fine* flocks were then not so numerous as they are now. I can not agree with the writer, "that the fine flocks of the United States are sadly deteriorated, indeed, nearly run out." Since 1825, I have been acquainted with fine sheep in this country, and I venture to say, that there are three, four, or five, and in this section, *ten*, fine flocks, where there was but one 18 years ago.

If Examiner will honor me with a visit, an invitation I herewith cordially tender to him, I will show him *fine* flocks, consisting of more than a few individuals—a dozen or two, or may be a few scores, of picked sheep together, and kept in the very highest possible condition; no, but flocks from 500 to 1,000—even more—which might alter his judgment, if that is not swayed by prejudice. Many of these large flocks shear on an average 3 lbs. and over, of wool, well washed on the sheep's back, the quality of which is superior to the "Paular," and "old-fashioned Merinos;" and I doubt not, should Examiner make a comparison between the two kinds himself, he would pronounce it *superfine;* and besides the quality, he would also discover a great difference in the condition and cleanliness of the wool. These flocks are high-grade Saxons, and show a result not quite so "unfortunate" as Examiner would make us believe. My own flock of 240 ewes and lambs and a few bucks, pure, unmixed Saxons, whose pedigree can be traced back to the importations of the Elector of Saxony, from the royal flocks of Spain, sheared this year 2 lbs. 13 oz. per head; last year 2 lbs. 14 oz. clean wool. If I had had a proportionate number of weathers among them, the average would have been at *least* 3 lbs. I repeat then, that the wool of the "Paular," or "old fashioned Merinos," does not compare with the Saxons and their crosses in quality and condition. If the fleeces from the former are heavier than from the latter, let it be borne in mind that they contain more *gum*, and *yolk*, dirt, &c, ; are not so fine, and that the sheep *consume a greater quantity of feed*. These are facts well known to every good judge of wool, and to every experienced, practical shepherd.

I would ask whether Examiner had his eyes closed against them when he was examining the fine-wooled flocks of the United States, and declared them "sadly deteriorated, indeed, nearly run out." I do not pretend, Mr. Editor, that I am acquainted with all "the fine flocks of the United States, but allow me to say, that my acquaintance among the wool-growers is pretty extensive. I am a purchaser, as well as a grower of wool, and handle no inconsiderable quantities yearly. My purchases this year amount to over 130,000 lbs., and I have examined at least 300,000 lbs., and a great variety of flocks of different grades and character, have come under my observation—sheep kept in the very lowest up to the very highest condition. I have always found, that where the blood of the "old fashioned Merinos, Paulars," or whatever their possessors are pleased to call them, predominated, there also I found *gum*, yolk, dirt, and other substances adhering to the wool, in great abundance, *unfit to make cloth* of, which goes far to make up the greater weight of fleece over the Saxony. Indeed, sir, when gentlemen talk of fine fleeces weighing 8, 9, or 10 lbs. they forget to mention "*including gum, yolk, dirt, and other substances adhering to the fleece.*"

Some years since, I saw a lot of "old fashioned Merino" wool at a factory in Massachusetts, which the manufacturer assured me would lose 55 per cent. in cleansing. "Indeed," said he, "we can never estimate the dirt in such wool correctly; it always exceeds our estimate, and we invariably suffer loss." And recently, a gentleman, a dealer in wool, told me that he sent this season, a large quantity to Boston to be sold, and that on making sale of some 36,000 lbs., the manufacturer who bought it, rejected all gummy, dirty fleeces, declaring that he would not have them, as such wool would lose more than 50 per cent. in cleansing. And to use the gentleman's own words, "there it lies, in a corner of the wool room, and I do not know what to do with it;" observing at the same time, that the manufacturers were "getting more cunning." There was a time when the supply fell short of the demand, and almost any wool, however gummy and dirty, found ready purchasers; for manufacturers were often compelled to buy it, in order to keep their machinery in operation; but that time has gone by, and they are now more choice in their selections, and when they come across a lot of such wool they pass it by, with observations like these: "I do not want it, it is too dirty, let him keep it for some body else"!

In your July number, page 130 and 131, Mr. Editor, you have made a calculation of the number of sheep, and the quantity of wool obtained therefrom. The census of 1840 shows, say 20,000,000 in the United States. Of this number you estimate only 11,000,000 shorn sheep, yielding 24,500,000 lbs. of wool, and the lambs at 9,000,000.—With due deference to your superior opportunities for information, I beg leave to say that you are over estimating the number of lambs, for every practical wool-grower knows, that that proportion is too large—if you had said one third, you would have come nearer the truth. I think you are mistaken also that the census of 1840 included lambs, it was exclusive of lambs. (*a*) You are, however, perfectly safe in estimating the average weight of fleece in the United States at 2¼ lbs. This is certainly too low by one fourth of a pound. (*b*) In this region it exceeds 2¾ lbs. Then you say, that by producing a superior quality of wool, its value would be increased nine cents per pound; this certainly is attainable; but the way in which you propose to bring it about, namely, by crossing with the "Paular, or old-fashioned Merinos," you would not obtain that end, thousands of fine flocks would be reduced in quality. (*c*) In this section it would reduce the quality as much as you wish to improve it. Coarse sheep would be improved by the cross; but to apply it to all the sheep in the United States, as I understand you to say, you would find yourself very much mistaken in the result. I venture to say, that on the same quantity of feed, you can not increase the heft of fleece of a fine flock shearing from 2¾ to 3 lbs., by your cross up to 3¾ to 4 lbs. per head, and have the wool in equally good condition. (*d*) An iucrease of feed will do much toward increasing the heft of fleece. A few words more and I have done.

Examiner, page 52, says: "As to Paular Bucks, it strikes me that you might, for any practical purpose, just as well have advised a cross of the fabulous Unicorn, for it would be just as easy to find the one as the other at the present time in the United States; for depend upon it, there is no such thing now existing, as *a Paular Buck*, nor *any thing deserving the name* in the whole country." And you say that "there are still large and valuable flocks scattered over the country." (*e*)

H. D. Grove.

(*a*) Immediately upon the receipt of this letter of Mr. Grove's we wrote on to Washington to ascertain the facts in the case, but were answered that the census bureau was abolished, and they could not tell. We know that when the person for taking the census in the district in which we were then residing, called upon us, he required the number of colts, calves, lambs, and pigs, although some of them were only three days old at the time; and to our objection of rendering an account of such young stock, he remarked, "never mind, they will be grown when the census appears, and it is the law." Most of those to whom we have put the question about rendering an account of the lambs in their flocks, say they did so; others do not recollect. If there has been irregularity with sheep-owners in giving an account of their lambs, of course we are incorrect; and we think, upon reflection, we may have estimated the number of lambs too high; though, on the other hand, we are quite certain Mr. Grove has set them down as entirely too few; for we know flocks that produce within a fraction as many lambs annually as there are breeding ewes.

(*b*) Perhaps when Mr. Grove has travelled south and west more extensively, and seen in the months of March and April, as many half-bare sheep as we have, which shed their wool from disease, want of care, &c., he may come to a different conclusion. We have often seen flocks in the same condition at the north too, leaving many of our farmers little to boast of in this respect.

(*c*) We have turned to the article to which Mr. Grove alludes, but really, we do not find that we used the expressions attributed to us. We said "Spanish Merino," also, "unadulterated Merino;" meaning thereby, the Rambouillets more particularly. We also spoke in general terms, in recommending the use of these. Such a flock of Saxons as Mr. Grove's we would *especially except*; and if the accounts which we hear of them be correct, and we have no doubt they are, we would not cross them with anything less fine than themselves. They are unquestionably superior animals, as is proved by their superior weights of fleece, and the high price the wool commands; and we wish, since the name of Saxon has been so basely misused in this country by miserable counterfeits, that Mr. Grove would give his flock the name of Electoral; for they and their descendants are probably the only ones entitled to it in the United States. With this name, they would then fairly stand aloof from the common herd, as they deserve, and not be associated in idea hereafter, with the miserable riff-raff of the country, passing under the general name of Saxons. It is our intention next season to call and see Mr. Grove's flock.

(*d*) We meant to be understood as alluding to a cross on the coarser and more restiff sheep of the country, when we spoke of obtaining an increase of weight of wool on the same food, and we know that this can be done.

(*e*) True enough, but we did not say these valuable flocks were Paulars; nor did we go so far as to assert that they were *pure* Merinos of any distinct name. We wish it understood, that we do not endorse all the opinions of Examiner any more than we do other correspondents — he speaks for himself, and we for ourselves.

For the American Agriculturist.

SEA-MUD AS A FERTILIZER.

Flushing, L. I., November 8th, 1843.

Can you inform me whether the sea-mud which is found on the shore, below high-water mark, is of any value to the farmer; and if it is, in what way would you advise that it should be applied? Do you think that it would answer in a compost heap, or would it be preferable to put it into the cattle-yard or hog-pen? I have thought that the only objection to using it would be on account of the great quantity of salt, which it contains; although Leibig and other celebrated writers, speak in very favorable terms upon the application of salt. And here arises another question. Are not those farms which are situated upon the sea-shore sufficiently supplied with salt by the winds which are constantly sweeping over them? Johnson remarks that this is the case, and if this is so, would not the application of this sea-mud be too strong? although I am inclined to believe that by drying the mud, much of the virtue of the salt would necessarily be destroyed, and as sea-water contains, as Leibig states, many very fertilizing qualities, this mud which perhaps has been accumulating for ages, must have imbibed a large quantity of all those properties, of which sea-water is composed. By answering these questions you will greatly oblige one of your subscribers.

R. B. C.

For an answer to the above see page 322.

The following communication was read before the New York Farmers' Club by the Hon. Henry Meigs at its meeting August 29, and is obligingly furnished us for publication.

For the American Agriculturist.

FARM OF HUGH MAXWELL, Esq.

GOOD EFFECTS OF MARL.—In a conversation with Hugh Maxwell, Esq., some short time since, he stated some facts in relation to the fertilising power of a red marl abundantly existing at Nyack, which induced me to visit the spot. I found Mr. Maxwell's farm of 110 acres bounded by the Hudson, well worth a visit. The whole was in excellent fence, made of the loose stones found on the land, neatly piled about 4½ feet high, forming fields of from 4 to 8 acres. The formation of these fences has used nearly all the stones which were on the surface of the lands. And in this it would seem as if Divine Providence had caused the rocks to be distributed of the proper size for fencing. Had the pieces been much larger or smaller they would not have answered the purpose so well as they now do. If they had been planted two feet under ground, or had been piled in larger masses, the labor of fencing would have been very greatly increased.

This farm, as well as all those about Nyack, lies on the singular mass of sandstone included by a front of about five miles on the river. All the surrounding rocks are of other materials. This sandstone, when quarried, exhibits strata of a kind of red marl of many feet in thickness, lying between strata of the sandstone. The quarry-men throw it out of their way, and millions of loads are lying near the water's edge, so that in many places vessels can lie alongside a bed of it, and slide it on board. On Mr. Maxwell's farm, the former proprietor, desirous of making extensive hard walks through his garden, caused this marl to be put upon them about one foot deep. Soon after this was finished, the walks began to produce clover; the white in such profusion and persevering succession, that all prospect of using the paths in that condition was abandoned: they could not be kept in order by the hoe. Mr. Maxwell being strongly impressed by this occurrence, determined on applying it to the surface of his farm. I saw a field of corn of several acres which had been top-dressed this year with the red marl, now bearing not less than 80 bushels of shelled corn to the acre—as great a product as is obtained from the best city manure, costing at Nyack nearly 37 cents per load. I saw an upland field of wheat, on which, as an experiment, Mr. Maxwell had top-dressed with this marl a space of three rods by two, from which I pulled an average bunch of straw-stubble, that is more than double the size and weight of any like parcel of stubble, to be found in the whole field of several acres. Unfortunately the husbandman had cradled all the wheat indiscriminately, which prevented Mr. Maxwell from examining the separate product of the wheat. I should not hesitate to pronounce it a double product. Mr. M. top-dressed a field of oats with this marl, and the yield was 70 bushels per acre. He top-dressed a field of clover with it the third year from the seeding, and the product is heavier than the crop of the *second year*. This field was dressed with ten loads of marl per acre. The corn is large 12-row yellow, and the stalks are about 10 feet high. The corn-blades never curled during the late drought, while other fields all curled. The corn was worked with the hand-harrow once, with the cultivator twice, and was hoed twice. No plowing between the hills. Mr. M. thinks that in dry weather it is very injurious to run the plow through, for it cuts the smaller roots of the corn. He has tried 25 bushels of hickory ashes, against 25 of anthracite coal ashes, and found no perceptible difference in the result.

The general effect of this red marl is perceptible in almost every plant and tree in that vicinity. Fruit-trees are especially vigorous and free from disease. Flowering shrubs, roses particularly, seem not to have been touched by any insect. I pulled up a mullein stalk growing on a naked mound of this marl, which measures nine feet in height, and the flower stem, which is covered with buds, is four feet in extent. The trees, excepting peach alone, are more thriving than those I have anywhere seen. The peach-trees have the yellows. Moss roses growing in rich grass are remarkably strong; Mr. M. finds that they do better closely surrounded by grass than in clear ground. He has ten kinds of healthy cherry-trees, including the red and white ox-heart, and the bull's eye. He has freely given, and wishes to distribute buds and grafts to all those who ask for them. Mr. M. has very healthy apricots, which have yielded fine fruit. *He smoked the blossoms with sulphur and pitch*, and all the fruit was perfect. *This smoking was done in the evening.*

Some of the fields had never been but partially cultivated, on account of being so swamped that cattle mired in them. He made in one four-acre field a drain ten rods long, and three feet deep, filled in with coarse stone. This drain formed a *perpetual spring for his cattle*, and this barren field has now buckwheat of at least *thirty bushels per acre. One and a half bushels* of seed was sowed per acre. No manure needed. This drain cost $1.75. Twelve acres were drained in the same style at a cost of $150; this field is now fine, and asks for no manure from New York, or Nyack marl. He prefers the same amount of marl to best New York city manure for all grains and grapes.

Mr. M. has the old English yew thriving in open air in winter. The European mountain ash, white and red linden, red maple, weeping ash, weeping beech, weeping elm, Madeira nut, (one five years old bearing fruit,) Spanish chestnut now in fruit, (this tree has also some blossoms on it at this time.) Apricots grafted on plum stock are very thrifty.

A Remarkable Horse.—In passing through Mr. Maxwell's barn-yard, I noticed a couple of horses, one of which was hoppled with a strong iron chain. What mischievous young horse have you there? He replied, it is my old family mare Kate, who has carried me, and my wife and children, safely for the last one and twenty years! I bought her when she was about four years old, but she will break fences now (wooden ones) with her irons on, she is so active and cunning.

Locust Eggs.—I remarked at Nyack the work of the locust, and Mr. M. and Thomas Addis Emmet, Esq., examined with a good microscope, a twig worked by the little insect. The twig being split in the line of the work, exhibited the whole process of the egg deposite. The twig is pierced nearly to its centre at every three quarters of an inch, or nearly so; the wood is rendered fibrous, it is then lifted up, and the eggs, which are of a long, oval form, are deposited side by side at an angle of about 45 degrees to the grain of the twig, and the fibrous tuft of wood placed over them, with its end sticking out; these incisions being repeated every inch on a line for some few inches in each twig. With the microscope, we saw the eyes of the young locusts always heads to the centre. The general outline of the young animal was perceptible through its delicate membranous cover. They moved slightly on being disturbed. Almost every twig so operated on by the locust was entirely dead. The magnifying power of the microscope was perhaps 40 or 50.

Value of an Orchard.—I visited an apple orchard at Nyack, which arrested my attention by its regular and healthy appearance. I found young Van Houton at home, who, with perfect good feeling and true politeness, gave me the account of the orchard which I desired. When his father was about fifty years of age, he undertook to plant 150 winter pippin-trees on that spot. His neighbors thought him an old fool to plant twigs of apple at his time of day. Young Van Houton, then about 16 years of age, held the little nurslings in the holes while his father filled in the soil. The old gentleman continued to prune them, so that they are widely branched and open for air and sun within the mass of branches. For twenty or twenty-two years past, the old gentleman has often received $1,000 a year for his apples. Sometimes $6 per barrel; sometimes sold in the orchard for $1 per barrel. That old gentleman and his wife are now, between them, 174 years old. Let no man be afraid to plant winter pippins because he is fifty or sixty years of age.

I have been highly pleased with my excursion. When gentlemen of high rank in learned professions are found turning that intellectual force which has influenced the most wealthy and intelligent portion of mankind, from law, politics, &c., to that greatest, best of all arts—agriculture, I look for good results and I find them. The old world is hard at work in this direction, and I hope that we shall watch her operations with the eye of our own bird, and see to it, that we be not excelled in any good thing.

For the American Agriculturist.

MEDITERRANEAN WHEAT.

Wheatland, Va., November 2, 1843.

I have noticed your remarks in the October No. of your paper, on the Mediterranean wheat. Your views coincided with mine when I first sowed this variety of wheat; but I have sown it now for two seasons, and the change has been so great in the color, as to convince me that by cultivating it here, it will lose its dark color, and become as good in that respect, and yield as much flour as any wheat we have. The two seasons I have raised it, it has been the best wheat I had. I have doubts whether it will tiller as much as some other varieties, and therefore sow it much thicker.

Robert L. Wright.

For the American Agriculturist.

TOPPING COTTON—MARL.

Sumpter District, S. C., Nov. 4th, 1843.

In those excellent matter-of-fact articles on the cultivation of cotton, which have appeared in the late numbers of your paper, by Dr. Philips of Miss., and which, by the way, are the best I have ever seen on the subject, I do not recollect that he has touched upon the subject of topping cotton. I have made one experiment in this, and was pleased with the result. Some planters north of us, I understand, have also tried this method, and find the cotton is not so apt to shed, as when it is not topped, especially in wet seasons. Ordinarily we reckon the first week in August the best time for topping; but this, of course, will depend upon the season, and the forwardness of the crop—for sometimes it must be earlier, and sometimes later.

I tried the effects of what I suppose to be marl, on a small spot in one of my fields, say about one acre. The marl I judge to be of poor quality, yet can not say, positively, as I have no analysis of it. I dug it out in January last, and spread it broadcast, at the rate of 30 loads to the acre, as large as an ordinary pair of mules would carry. It seemed to pulverize well, exposed to the severe frost of last winter, and I plowed it in deeper than I usually plow, and harrowed the land well. The result is, I shall get full one third if not one half more cotton off of this piece than any other part of the field, which more than pays me for the trouble.

I need not say that we read the articles on manures in the Agriculturist with much interest; for many of us are beginning to learn that it is not only easier and better, but even *cheaper* to renovate our old lands, than emigrate to a new country and bring new lands into cultivation. C. McD.

For the American Agriculturist.

HINTS ON THE CULTIVATION OF WHEAT.

Buffalo, October 25th, 1843.

There are four conditions that modify the value of a wheat crop. One may not only be larger in measure than another, but heavier for the same measure; yielding more flour from a given weight; and lastly, affording a greater proportion of gluten from the same quantity of flour. It is necessary for the farmer to have each of these considerations in view, if he would attain the utmost success in the cultivation of this invaluable grain. My object, in this brief article, will be, to afford some helps to the agriculturist in increasing the ultimate value of his crop. As a starting point, it will, perhaps, be most instructive to inquire, what are the constituent elements of wheat?

Sprengel has analyzed both grain and straw, and the following is the result:—1000 lbs. of wheat afford 11·77 lbs. and of wheat straw, 35·18 lbs. of ash, consisting of

	Grain of wheat.	Straw of wheat.
Potash	2·25 lbs.	0·20 lbs.
Soda	2·40	·29
Lime	·96	2·40
Magnesia	·90	·32
Alumina with a trace of iron	·26	·90
Silica	4·00	28·70
Sulphuric acid	·50	·37
Phosphoric acid	·40	1·70
Chlorine	·10	0·30
	11·77	35·18

This analysis shows an amount of ash far below the average. Davy found 15·5 lbs. of ash in 100 lbs. of ripe wheat straw; and Johnstone, in one variety, grown on a soil abounding in limestone, 16·5 per cent. of ash.

Thus it will be seen, according to the above analysis of Sprengel, that of the total of grain, less than 1¼ per cent., and of straw, rather more than 3½ per cent. is earthy or inorganic matter; while all the remainder is composed of the organic materials, carbon, oxygen, hydrogen, and nitrogen, of which carbon alone constitutes about one half. All these constituents are absolutely essential to the perfection of the crop. In the natural condition of a fertile soil when first reclaimed, these materials are usually found in sufficient abundance to produce wheat. Such was the condition of nearly all the land in New England, and the eastern portion of our own state; but a few years of careless, unscientific cropping, has exhausted one or more of those constituents which may have existed in an available form; and much of it, after a very few of the first years of its cultivation, has been of little or no value for wheat, under the system of tillage there adopted. It has been asserted by Dr. Dana, that in a soil purely granitic (and much of the land in that region partakes of this character), there is potash enough for successive crops of wheat for 3,000 years, and lime enough to last more than twice that period. But the result is the same for the growing vegetation, whether the materials do not exist at all, or are locked up beyond the reach of it. It is absolutely certain, if wheat will not grow with care and industry, and all the usual appliances of good husbandry, where it once flourished successfully, there is one or more ingredients wanted, in such a condition, that the plants can appropriate them to their own nourishment. And first of the inorganic matters.

The proportion of straw will vary from 2 to 3½ times the weight of the grain. Suppose the quantity taken off the land be estimated at 2½ times the weight of the grain. In a series of crops averaging 20 bushels of wheat per acre, for 30 years, we shall have as the result 36,000 lbs. of grain, and 90,000 lbs. of straw carried off the soil, charged with all the materials above enumerated, and probably sufficient to reduce the land to a very small capacity for production.

Some limited portions of the earth, as the plains of Babylon, when under skilful cultivation, the valleys of the Indus and the Nile, and the fields of Sicily, almost since the days of the flood, have produced luxuriantly, without the aid of manure to any extent; but it must be remembered the former have their fertility annually renewed by the rich overflowings of the rivers, which are charged with all the materials necessary to restore exhausted nature; while the soil of the last, being wholly of basaltic origin, is rich in the alkalies, which a year or two of rest, is sufficient to replenish in a soluble state, to be again taken up by the luxuriant crop. Hence, we have witnessed a drainage of nearly all the products from these fertile regions, for thousands of years, with impunity. But they are exceptions which only go to prove the general rule. The farmer must look to it, that all the ingredients that enter into his crops, are supplied by the materials in his soil, or a deficiency, or entire failure, will be the inevitable result.

Although all the constituents entering into the straw and grain, are absolutely essential to their perfection, they are not all equally essential to be contained in the soil. It is indispensable, however, that the earthy or inorganic portion of them be there, for these can not be obtained elsewhere. How shall they be best supplied? Ashes, it is believed, afford the cheapest, as well as one of the most effectual applications that can be made for grain. Of the ten fixed ingredients enumerated as entering into wheat, ashes yield potash, soda, lime, magnesia, sulphuric and phosphoric acids, in large proportions, and silica and iron in smaller. The chemical operation of the potash, and carbonate and sulphate of lime, however, when added to the soil, is to supply the silica, in a soluble state, from its natural condition, (it being found in abundance for this object in every soil, except in such as are formed almost exclusively of peat,) for the demands of the crop.

An increased supply of lime and gypsum, beyond what is found in the ashes, is frequently advantageous; and when the latter is beneficial, as it generally is, it should never be withheld to an extent in the highest degree useful. Of the operation of this last material, beyond yielding a portion of its sulphur to the gluten, we have as yet no satisfactory explanation. In respect to the theory of its concentrating ammonia in the soil from the atmosphere, we have very contradictory authority. Liebig asserts it, Johnstone questions it, and Dana denies it; yet the increasing fertility its application produces, would seem to give the weight of experience in favor of Liebig's views.

The chlorine and soda, if not furnished by the ashes in proportions sufficiently large, may be procured by the application of common salt, which yields both. The phosphoric acid may be obtained in any required quantity, by the addition of bones, which, dry or calcined, yield both that acid and lime, phosphate of lime constituting 86 per cent. of bones. Most soils contain alumina in abundance to furnish the food requisite for wheat; yet as it is one of the most valuable soils for this grain, both as seizing upon and retaining ammonia, and furnishing a firm foothold for the roots of the plants, it is important that lands intended for this purpose, should be adequately supplied with alumina as a top-dressing, if naturally deficient in it.

We have, then, above, all the inorganic materials for the purpose required. But there is about 97 per cent. of the crop yet to be made up of the organic constituents, carbon, oxygen, nitrogen, and hydrogen. How shall they be provided for?

First, by the selection of a calcareous or clay soil, which will furnish a proper bed for the roots of the plant, and by their peculiar mechanical texture and chemical composition, will not only hold the manures incorporated with them, but also draw some of the requisite constituents largely from the air; the former absorbing carbonic acid, and the latter ammonia.

Second, by the liberal application of common farm-yard manure, to a crop preceding that of wheat, which will leave a rich mould highly conducive to an abundant yield of perfect grain. An instance has been recently given, of a Maryland farmer raising large successive crops of wheat, by the application of putrescent manure directly upon the grain, and all injurious effects were obviated by the use of a moderate quantity of lime. This is a practice, however, which has not been found generally to be successful, causing either blight, or such rapid and luxuriant growth, as to crinkle and lodge. This effect is also produced in peaty and rich alluvial soils, where the silicate of potash, so essential to the formation of a strong, upright stalk, is not furnished in a quantity large enough for the object.

Third, the liberal use of charcoal scattered through the soil. It is claimed from its use, that the wheat crop of France has been largely augmented within the few past years. Several instances of its greatly beneficial effects, have been noticed in this country; though its influence has not hitherto been felt on wheat, by an extensive Virginia planter, in two or three recent experiments. The great power of condensing gases peculiar to charcoal, was noticed by some of the early chemists. Murray mentions it, and Saussure gives a table of results, in which he shows that perfectly dry charcoal from boxwood, will absorb 90 volumes of ammonia; 85 of muriatic acid; 65 of sulphurous acid; 55 of sulphuretted hydrogen; 35 of carbonic acid, &c. This condensation takes place in its pores, and does not produce any alteration, or new chemical compounds of the gases thus stored up; but their use in an agricultural point of view, is invaluable; for while the coal yields no fertilizing matter from its own substance, being nearly indestructible, it takes from the atmosphere in great abundance, and hoards up for the future use of the plants, one of the most evanescent, as well as most useful materials for their perfection, viz., the nitrogen contained in the ammonia.

A fourth means for procuring a good yield of wheat, is by alternating with clover, and turning in a liberal share of it as a preparation for the wheat. This is practised extensively throughout the wheat districts of the United States, and has resulted in great benefit; for besides yielding a portion of food to the grain, it keeps the ground in the best possible mechanical condition.

A fifth means, is to return all the straw and chaff to the soil, as they contain a large quantity of the identical materials required for a succeeding crop.

With the foregoing causes in full action, and an adequate supply of moisture, whether from rains, dews, or artificial irrigation, the crop will draw largely from the atmosphere for the supply of its required organic constituents. Carbon will be furnished from its carbonic acid; nitrogen from its ammonia; hydrogen from its vapor, dews, and ammonia; and oxygen from air, water, and soil.

The use of all these materials, *together with the selection of the best varieties of seed*, will give the first three requisites of a wheat crop; large measure, heavy weight, and much flour.

Manures peculiarly adapted to the object, will tend in the highest degree to produce the greatest quantity of *gluten*, the most valuable portion of the flour. It is true, that climate has much to do in condensing, and of course, improving the value of wheat. It is a general principle, that the warmer and drier the climate where it is grown, the more valuable the grain. Wheat from the south of Europe, is worth more than when grown in the north; and that from any portion of the United States, owing to our superior dryness of climate, is more nutritive than what is produced in Great Britain. This difference is increased from 8 to 14 per cent. in favor of the American. Gluten varies in wheat from 8 to 35 per cent.; in rye, 9 to 13; barley, 3 to 6; and oats 2 to 5. The *quality* of wheat with regard to the quantity of gluten it contains, is nicely estimated and fully regarded by accomplished bakers.

The nitrates of potash, or soda, are frequently used in England to increase not only the quantity, but especially the quality of their flour, a practice the high prices of land and produce may render profitable there, though it is hardly to be expected they could generally be used in this country to a profit. In an experiment lately tried in England, one acre of wheat dressed with one cwt. of nitrate of soda, gave 42½ bushels, weighing 60¾ lbs. per bushel; another acre dressed with two cwt. yielded 47⅜ bushels, weighing 60½ lbs.; while an undressed acre, in every other respect similar to the others, yielded only 27¼ bushels, weighing 61 lbs.

Numerous other instances could be given equally conclusive.

Although we may not be justified in using these somewhat expensive salts, so highly charged with nitrogen, there are sources of supply within our reach, especially rich in this material, and abounding in many of the other ingredients of fertility. These are animal manures of all kinds, but more particularly urine, human excrements, and the offal of animals, such as uncalcined bones, horns, hair, hides, flesh, blood, &c. All of these contain large proportions of nitrogen, and if carefully incorporated into the soil, would tend largely to the increased production and value of the wheat crops throughout the country. An experiment was made in manuring wheat with cow dung, which contains the smallest proportion of nitrogen, and this yielded 11·95 per cent. of gluten. Another parcel, grown on land manured with human urine, gave 35·1 per cent. Thus it will be seen, that the maximum of value in wheat, may be reached, by the application of an article, almost everywhere wasted in the United States.

It is by skilfully feeding the wheat plant with all the nourishment that it can take up, that the crops may be indefinitely increased. Lord Hardwicke stated, in a speech before the Royal Ag. Soc. of England, that the fine Suffolk wheat had produced 76 bushels per acre; and another and more improved variety had yielded the astonishing quantity, of 82 bushels per acre. There is no comparison between the capacity of an animal and seeds, to produce results; for while the former is limited to a definite growth, which no effort of science or skill can augment, a seed may multiply beyond almost any assignable limit. We have been shown a stool of wheat, originating from a single seed, the growth of the present season, with 30 stalks, averaging from 100 to 110 grains on each head. Over 3,000 perfect grains, is thus the product of a single parent in one season. It requires, then, but the proper pabulum to produce good wheat, within the wheat latitudes, in every portion of the Union. Some of our worn-out eastern lands may be so totally unsuited to its growth, as not to justify the efforts of reclaiming or fitting them for this object, especially, while we have a region in the west, every way adapted by nature, to its most successful cultivation. But we can not for a moment doubt, that when those western fields become comparatively full, industry and science will combine to clothe again those hills and valleys (now but partially robed with a scanty herbage), with teeming crops of wheat, such as gave to them, in their pristine days, a fame for fertility seldom exceeded.

R. L. ALLEN.

For the American Agriculturist.

A PENNSYLVANIA DAIRY.

Philadelphia, Nov. 6th, 1843.

NOTICING in your October number an account of a dairy on Long Island, I am induced to give you a description of one in this vicinity. Mr. Henry Charley has a dairy farm near Laurel Hill, where he keeps from 40 to 50 cows, consisting of Ayrshire, Holderness, Alderny, Durham, and a few natives; but mostly crossed with a fine, thorough-bred Short-Horn bull, and is raising full bloods, and high grades of this breed as fast as possible. He makes veal of his bull-calves, and raises all his best heifer-calves from his best cows for his own use. I found the cows luxuriating in a rich clover pasture when I visited them last summer between 2 and 3 o'clock, the hour for afternoon milking, from which they were taken by the herdsman, and driven half a mile to the barn. This is a stone building 100 feet long, 46 feet wide, with a wing of 60 feet, the same width as the barn, high walls, and steep roof, which make it capable of holding a great quantity of fodder, consisting last year mostly of cornstalks, (some of which he bought very cheap of his neighbors, while others let theirs stand in the field and this spring raked them up and burned them,) rye straw, and oats unthrashed, all of which he cuts and steams—sometimes with a little hay cut also and mixed with the above articles. These are all steamed together, or each separately, (as best suits the appetites of the cows) in a large vat, connected with a pipe through which the steam passes from the boiler, which stands in a room adjoining with stone or ground floor. The chimney is of sheet-iron running up through the roof, and coal used for fuel, renders the risk for insurance at a very low rate. The water is supplied from a spring running into the yard, and thence through a pipe into the boiler. The cows are also watered from the same when the weather is stormy in winter, and they are not allowed to go out. But to return from this digression. After the fodder is sufficiently cooked, which takes but a short time, it is taken out into other larger vats or troughs, with scoop shovels, and there left to cool; then a suitable portion of Indian meal or ground rye, buck-wheat, or oats, or any two or all four mixed and ground together, (which in my opinion would be better,) adding a portion of ship-stuffs, shorts, or even bran. This is the food for the cows at all seasons, except when there is a full supply of grass. They are driven to a woods pasture for exercise and air when there is little or no grass. Air and exercise are indispensably necessary for the health of cows, and without these, the milk will always be more or less unhealthy, according to the nature of their confinement.

When the cows were brought into the yard, I was puzzled to know how they were to be handled; but the stable doors being thrown open, each cow entered the door nearest her stall, and went to it with as much regularity as a young miss goes to her seat in a boarding-school. There is a drop in the floor immediately behind the cows, 14 inches wide and 4 inches deep; into this all the excrements fall, the water running off immediately to a reservoir prepared for the purpose of receiving it; this, together with all the manure, was taken away daily, and put upon the land or crops or in a heap to make compost; so that the premises were kept perfectly clean and sweet. The floor was covered with a thin bed of cut straw, which was passed off with the manure as it became soiled, and by being cut, worked immediately into and incorporated itself with the manure, without vexing the husbandman or gardener as long green manure so frequently does. The floor behind the cows, between the trough to catch the liquid and the wall, is six feet wide, with strong plank platforms or tables on which to set the vessels containing the milk. There is an open space directly over the vat for steaming, where all the feed is cut and passed down through a hopper into the vat; also, hoppers or spouts leading from the meal room over head directly into the vats, which contain the steamed feed for cooking. The mangers in which the cows are fed are broad, so that the food may be thrown into them with scoop shovels without waste, of which I found nothing of the kind about the whole premises. If a little too much feed is given to one animal, and consequently left, it is carefully scraped out and fed to one having a better appetite; thus the mangers were kept clean and sweet. Mr. Charley feeds roots, but to what extent I did not learn. I hope he may be induced to write you a letter, giving a description of his cutting machine, which does its work better than any one I have ever seen; having two blades coming together like shears, cutting corn-stalks through their joints with as much apparent ease as a pair of tailor's shears would cut a thread.

There is a stable for dried cows which were feeding for the butcher. Box stalls are provided for cows about to calve; the young cattle are kept by themselves, as are also the calves. Mr. Charley was not at home when I visited his dairy; but this disappointment to me was made up by the kind Mrs. C., who, with justifiable pride, showed me her spring house with its large copper caldron for scalding her milk tubs, pans, pails, churns, &c. &c., in the best of order, all of which she personally superintends and looks after; and whenever there is an overstock of milk for city customers, it is here converted into butter of the choicest quality, and each market-day finds her at her stand with her butter and lots of garden vegetables, the raising of which she also superintends and takes into the city at the dawn of day. That some families are sick and others miserably poor, is not strange, to one who looks behind the curtain and sees what can never otherwise be described. S. A.

For the American Agriculturist.

REPLY TO THE GARDENER'S CHRONICLE.

New-York, 14th November, 1843.

The Gardeners' Chronicle, published in England, has the following criticism on my essay of dock-mud, inserted in your April number of this year, page 13:—

"We trust the editor is more correct in his other statements than in this, concerning the percentage of sea-salt in guano, which contains little more than a trace of it."

I have never analysed the guano, but depended on one or two analyses given by Professor Johnston, reader of chemistry in the University of Durham, England, in the appendix to his Lectures on Agricultural Chemistry. He gives tables of contents of two parcels, the first containing 30.3 per cent., the second rather more than 11 per cent. of sea-salt. I took the larger quantity, to prove that if dock-mud contained sea-salt, it could be no objection to it as a fertilizer.

It is highly important that the tables of analysis of celebrated manures should be correctly given, and if the editor of the Chronicle can furnish correct tables, he will be conferring an important boon on the agricultural community of the whole world.

Wm. Partridge.

From the American Agriculturist Almanac.

SOUTHERN CALENDAR FOR DECEMBER.

The closing month of the year is one in which every agriculturist should take an interest, and for many useful hints we will refer the reader to the Northern Calendar for this month.

Cotton-picking will probably occupy this month until Christmas, when this business will have been completed, if the culture has been well managed, and the season favorable. It would be well to start your plows and break up ground for corn; let nothing but cotton prevent—not even cleaning; for plowing is only one job; yet, if done soon, it is generally advantageous, and if bad weather should set in when it must be done, time will be lost, and a drawback ensue, whereas by plowing in time, cleaning can be done later.

In weather not employed about other labor more important, manure and trim all kinds of vines and fruit-trees, except the orange tribe. Transplant evergreens and other trees, sweet briers, honeysuckles, jasmines, &c.; sow late peas and beans, and set out onions for seed; set all hands at work in cleaning up for other crops, picking up limbs, grubbing, cleaning up hollows, sides of bayous, cutting down corn-stalks with hoes, gathering materials for making manure, &c., &c.

If you do not live in the immediate vicinity, say five or six miles, from a sugar-plantation, by all means keep bees. This can be rendered one of the most productive branches of business of the day. Procure a few swarms at first, and they will soon multiply to any extent required. Use sections of hollow logs, four or five feet long, for hives, if you have no other more convenient materials to make them of, and allow the bees to work over the honey a second time, that you may avoid the injurious effects in eating honey which may have been gathered from poisonous flowers. If the above-named class of hives be used, there will be no necessity for killing the bees; for when the hives are filled with honey, they can be removed without harm from the end opposite to that in which the bees are at work, and they will immediately go to work and fill the vacancy. In most parts of the Southern States bees may be kept at work during the winter. If there are not flowers for them, they can be made to work over the bad honey collected the season before.

This is also a busy month for the sugar-planter. He will be active in cutting and carting his cane with all possible despatch; and he should employ one or more practical and intelligent men to conduct the operations of the mill. In the manufacture of sugar, we know of no better method than that given by Professor Mapes in a letter to Hon. H. L. Ellsworth, from which we make the following extract:—

1. To cut the cane as ripe as possible, but before any acetic acid is formed; litmus paper, touched to the fresh-cut cane, will turn red if acid.

2. Express the juice without loss of time, as every moment after cutting will deteriorate its quality.

3. A small quantity of clear lime-water, say one quart to a hundred gallons of juice, should be added

the moment it is expressed, unless the juice shows acidity with litimus paper; in that case, no lime should be used, but a solution of sal-soda or soda ash should be added, until it is precisely neutral.

4. When the juice is neutral, free from excess of acid or alkali, it should be évaporated in such an apparatus as would finish its charge in 30 minutes; if the boiling power is too small, good crystallization can not possibly be obtained.

The whole time occupied, from the cutting of the cane to finishing its boiling, should not exceed one hour.

5. To know when the boiling is finished, place a thermometer in the kettle, and continue to evaporate until it stands at 239° Fahrenheit. If, when placed to run off after cooling, it should be found too freely boiled, the next time boil to 240°, or, if too light to run off, to 238°, and so on.

6. The kettle or boiler should be so arranged, that the moment it is done its charge should be thrown into a cooler, capable of holding a number of charges. The first charge should be left in the cooler with stirring, until the second charge is thrown in; then with an oar scrape the crystals found on the side and bottom of the cooler loose, and gently stir the whole mass together: the less stirred the better; so continue at the letting in of each charge, to stir gently; and when all is in the cooler, let the whole stand until it cools down to 175°; then fill out into sugar-moulds of a capacity not less than 14 gallons. When cooled in the mould sufficiently, say fourteen hours, pull the plug out of the bottom of the mould, and insert a sharp point, nearly as large as the hole, some six inches; withdraw the point, and stand the mould on a pot to drip.

7. If the sugar is intended to be brown, leaving it standing on the pot for a sufficient length of time, in a temperature of 80°, will run off its molasses, and leave it in a merchantable shape; it will probably require twenty days. It can then be thrown out of the moulds, and will be fit for use. When moulds can not be obtained, conical vessels of wood or metal, with a hole at the apex, will answer equally well. D.

From the American Agriculturist Almanac.

NORTHERN CALENDAR FOR DECEMBER.

Settle all your accounts, collect what is due you, and pay what you owe. "Short settlements make long friends." Examine your farm statistics, and see what have been the results of your experiments with the different kinds of manures, seeds, modes of tillage, &c., &c.; and note them well for future use. No farmer ought to be without such a book, in which all experiments should be carefully recorded at the time, and the results carried into a separate book for his own use hereafter; and if new and valuable discoveries are obtained, communicate them to some agricultural periodical for the benefit of the world. Recollect, you have the experience of thousands to guide your operations, and, by contributing to the general stock whatever may be useful, you are but returning to mankind a part of the benefits you have derived from them. But avoid twaddle and humbuggery, and oft-published statements, and prolix or tedious narration, and give all the circumstances material to the subjects in the briefest, plainest, simplest language possible. Above all things, send in your subscription to one or more valuable agricultural papers, and get as many of your neighbors to subscribe as possible; and consider, in so doing, you are benefiting yourself by it ten times as much as you are the publishers. Summer is peculiarly the time for making observations and experiments, and winter the time for communicating them. *Remember the poor*, not only in this month, but every month through the year, and especially during the inclemency of winter. You need not give so much to them outright, but endeavor to put them in a way of making themselves comfortable, by affording them employment, by which, you may be benefited, while doing them good. You thus confer on them a triple benefit, by furnishing them the means of comfortable subsistence, teaching them to help themselves, and avoiding the habit of receiving *charity*, which insensibly weakens their sense of self-dependance.

Stock now requires increased attention: they must be well housed, or at least protected against wind, with a shelter to which they can resort in storms, well supplied with salt, and abundance of water, if possible, in the yard, where they can get it when they want, and without wearying themselves in looking for it, and wasting their manure by dropping it in the road, or by a running stream or pond, where it will all be lost. Their feed should be regular, and given to them as near stated times as possible. They look for their food then at certain hours, and are not uneasy and fretful till the customary period arrives, when they again fill themselves, and rest quietly, digesting their food till it is time to look for another supply. If brought up in regular habits, brutes are much better time-keepers than many are disposed to consider them who have not observed closely their intelligence. Now is a good time to break steers and colts, while the roads are smooth and hard. They ought to be early accustomed to handling and the halter, and be gently treated, by which they are more disposed to yield to the wishes of their master. If they have been always used to good treatment, they will acquire a confidence in their keepers, and the more readily submit to their guidance. 'Tis always better to train them with strong, well-broken animals. Sympathy has more to do with the brute creation than they have credit for generally; and the good habits and orderly behavior of the older animals, they have been accustomed to treat with deference, will not be without their wholesome effect on them.

This is the best month for spreading out hemp for dew-rotting, in the latitudes below 40°, as it gets a whiter and better rot than if spread earlier.

Kitchen-Garden.—Every fine day uncover the frames in which are lettuce and cauliflower plants; otherwise they will become spindling, from want of air. Hot-beds can now be made, for forcing asparagus for the table in January. If the ground is open, continue trenching for spring crops. When the ground is frozen, cart manure, repair fences, clean seeds, prepare tools for spring. Provide pea-sticks, bean-poles, &c., and finish all that will be required in the spring, and which can be done when the ground is frozen.

Fruit-Garden and Orchard.—Finish those things which may have been omitted the previous month. If the weather continues open, digging and plowing may be done advantageously. Perform any work that may tend to forward your business in the spring.

Flower-Garden and Pleasure-Grounds.—Continue to protect your beds of bulbs, and also flower-beds and shrubs as directed in last month. Should the weather continue open in the early part of this month, bulbs may still be planted. They should not be left as late as this, but if such has been the case, they had better be planted now than left until spring. Now carefully protect seedling bulbs. The more tender kinds of trees can have their roots protected from frost by laying manure or long litter about them.

FOREIGN AGRICULTURAL NEWS.

By the steamship Caledonia, we are favored by the receipt of our European journals up to the 4th November.

Markets.—*Ashes*, both pots and pearls, have advanced, and were brisk of sale. *Cotton* had declined ⅛d. per lb. The recent advices from Bombay and Calcutta of the East India crop, were not quite so favorable. The stock of Cotton on hand at Liverpool on the 1st November, was 720,000 bales, against 520,000 at same period last season. *Flour* was flat, and little doing in it. *Naval Stores*, declining. *Provisions* were about the same as by our last advices, with the exception of Cheese, the finer qualities of which were of quick sale. *Tobacco*, steady and firm.

Money still plenty, and the low rates of interest prevail.

American Stocks continue nearly the same as at our last. Very few recent transactions.

Agricultural School.—We see by the Berwick Warder, that an Agricultural School is established in Aberdeenshire, by the practical farmers of that county, which promises to be a very useful institution. It is superintended by Mr. R. O. Young, and we like its arrangements better than anything of the kind we have yet seen. To explain these, we make a few quotations from the prospectus.

The young gentlemen who may be intrusted to Mr. Young's charge for the purpose of being instructed in the principles and practice of Scottish agriculture, will have daily opportunities of witnessing the regular routine of farming operations going on at the farm, and of taking an active part in these operations.

They will be required to keep, in a farm-book, a daily record of what has been done on the farm. Explanations will be given of the principles upon which the different operations are conducted, and upon which they will be examined at stated times. Regular minutes will be kept by the pupils of all such explanations, as well as of any facts that may come to their knowledge through their occasional intercourse with the farmers of the country.

There will be stated times set apart for reading, as text-books, the most approved agricultural works of the day; and on the subjects of their reading Mr. Y. will minutely examine the young gentlemen, and will also require them to write exercises upon given agricultural topics—particularly those that bear on practice.

While it will be Mr. Y.'s care to direct the attention of the pupils to chemistry and geology in their application to practical agriculture, a branch of study until lately very little attended to, he will make arrangements for procuring the services of the professor of agriculture in the University of Aberdeen, for a few weeks every summer, to give lectures and conduct experiments on the analysis of soils, manures, &c.—thus securing to the pupils more than a mere theoretical knowledge of this important branch of agricultural education.

As nothing is so much calculated to impress any subject upon the youthful mind, as to invest it with a *personal interest*, Mr. Y. proposes to devote to the exclusive use of his pupils, a small farm, of about 50 acres in extent, adjoining to his other farm. This small farm contains a variety of soils, upon which experiments of different kinds may be conducted, on a small scale. It will be possessed and managed by the pupils, under Mr. Y.'s direction, and upon certain equitable rules as to each pupil's share of the concern. Each pupil will be required to keep regular books, exhibiting all disbursements and receipts, and the results of all experiments tried, with every particular connected with such experiments. Each pupil will be required to take his share of management, &c., and the profits of the concern, after paying a certain moderate rent, will, at each term, be divided among the young gentlemen, in proportion to their respective interests. It is conceived that such a plan will have a strong tendency to promote exactness, regularity, and business habits; but, without the consent of their parents or guardians, pupils will not be asked to join in this scheme.

Farmers' Magazine.—*Meat-Salting Instrument.*—The instrument resembles a common syringe of more than ordinary dimensions, and, although not quite so simple in its construction, it is intended to be used in the same way as the syringe, provided the point or tube be not exposed to the air. The advantages to be derived from the use of the instrument are explained by the fact that a joint of meat may, in the simplest manner, be properly salted in less than ten minutes The brine is made of the usual ingredients, and after the salt and other substances are completely dissolved, the liquid is poured into the machine, and the nipple or tube (the circumference of which is perforated with three small holes) is inserted into the most solid part of a joint of meat, and the contents are, by a very strong pressure, forced through the fibres until the brine is seen to escape on the surface. For this purpose a smaller quantity of pickle is used than is employed in the ordinary method of curing meat, and the bone (if there be any,) in the centre becomes thoroughly impregnated with the fluid. By the present mode of salting meat, it is a matter of some difficulty to inject the brine into the innermost part of a large joint, whereas by the process which is adopted in the use of Mr. Carson's instrument, the size or substance of the meat presents no additional trouble to the operator.

Prince Albert's Annual Sale of Live Stock.—Since Prince Albert has turned farmer, he has an annual sale of his fat stock, and is said to realize from 50 to 60 per cent. profit on it. The last took place in October, at which time 417 sheep, 55 oxen, and 9 cows and heifers, were disposed of, realising him £1,743, (about $8,000;) a clever sum for fat sheep and cattle.

Produce of Ewes.—Count de Gourcey states in that part of his Agricultural Tour in Europe, just received, that Mr. Walker, manager of the late Duke of Gordon's estates, in Scotland, informed him that from 200 Leicester ewes, and as many Southdowns, they *bring up on an average*, 450 lambs. We wish we had possessed this information when writing our notes to Mr. Grove's letter in this paper, as it would have been something of an argument in our favor, regarding the difference of opinion existing between us about the number of lambs bred in the United States.

New Farmers' Journal.—*Exportation of Cattle to Prussia.*—One bull and eight heifers have been recently purchased in England, for the Royal Agricultural Society of Prussia.

Netting for Sheep-Folds.—The fibre of the cocoa-nut is said to make the most durable netting for sheep-folds; it out-wearing several sets of tarred-hemp netting, and is so light, that a herdsman can with ease carry 200 yards of it.

Soiling.—Feeding animals in the summer-season with green food, cut daily, and given them in stalls or yards, is far preferable to grazing—First, because the food is consumed with less waste; secondly, because rest is an equivalent for food. The bodies of animals do not remain stationary, but are constantly wasting in proportion to the amount of exercise they undergo—hence, while they rove at large, they must receive from time to time new supplies in the shape of food, to make up for this waste, which are not needed when they are at rest, and consequently, by the system of soiling, less food will be required to fatten them. Thirdly, because by soiling there is an increase of valuable manure, which, by the old method of grazing, was nearly altogether lost.

American Provisions.—Within the last few days, 204 boxes of American cheese have been received in Liverpool. Every year the quality of the American cheese improves. Another article, which is arriving in very large quantities, is American lard, which is coming into use for many purposes for which salt and even fresh butter has been employed. Very excellent salted beef has come from the United States in considerable quantities.

Epidemic among Cattle.—This has broken out again in a most virulent shape in the north of England.

JOURNAL OF AGRICULTURE.—*Miller's Safety Reins.*—These consist of gut covered with leather, and are, therefore, proof against fracture; and being round, and of neat light appearance, form a rather ornamental and sporting-like appendage to harness or saddle. They are mounted in this way:—They pass through a hook placed on the head of the harness-bridle, and through a leather loop on the head of the riding-bridle, and come down on each side of the neck. About middle-way down the neck is a coupling with two swivels, which receive the reins from the head, and they then pass through the dees of the harness, and through the turrets of the harness-saddle, and along to the front of the splashboard to a rein-holder, by which they are held always ready for use. The head of the horse and the turrets of the saddle being both higher than the throat, and the coupling being short, and having leave to traverse the reins on each side of the neck, it settles on that part of the throat at which the reins, on being pulled, exert the greatest force, when, the windpipe being forcibly compressed, the horse becomes affected in his respiration, and, therefore, stands still, or slackens his pace for breath, which he immediately obtains on the reins being slackened. Thus, feeling he is mastered, the horse shows no farther inclination to run off again; but in case he should renew symptoms of starting off, a few firm grips of the coupling on the throat will let him feel the futility of his attempts.

In explanation of the origin of the invention, Mr. Miller stated that he was a farmer's son, and that, in his youth, he used to be employed at times to assist in catching horses at grass, by means of surrounding them with a rope, borne by a person at each end of it. He remarked that, in this service, although no restraint was laid upon the horses when the rope rested on their chests, yet, whenever it could be got upon their throats, they instantly stood still and allowed themselves to be taken. The idea which this recollection suggested, of the probable effect of pressure on the throat in stopping a runaway horse, led Mr. Miller to the contrivance of his safety-reins. In his first experiment, the band which connects the reins under the neck was attached to the headstall by hooks and straps; but it has been considered an improvement to allow it to move freely upon the reins, on which it settles in contact with the throat, in a proper position for use when required.

Our communications with Mr. Miller impressed us favorably in regard to his contrivance; but, wishing to see it in practice we availed ourselves of an offer by him to afford us an opportunity of judging of it in operation. We, accordingly, on a day appointed, accompanied him in a carriage drawn by one horse, for the purpose of trial; and we witnessed as spectators, as well as made ourselves, repeated tests of the reins, with the horse going at a smart canter, both on a level road and on a descent, and we invariably observed that the tightening of the reins caused the horse immediately to stop. No injurious effect seemed to be produced on the horse by the interruption of his respiration. He always appeared to breathe freely, and to be ready to resume his work, as soon as the tension of the reins was relaxed.

Upon the whole, therefore, we consider Mr. Miller's invention to be a neat and simple, as well as, to appearance, an effective contrivance for the accomplishment of its important object, in the prevention of the disastrous accidents which not unfrequently occur from horses running away; and we think it reflects much credit on the ingenuity of its inventor.

GARDENERS' CHRONICLE.—*Rhododendron.*—There is a variety of the Rhododendron ponticum growing here, which appears to be different from any of the others. It comes into flower about the same time as the others, but instead of unfolding its blossoms at the same rate as its neighbors, it only opens a few at a time, and continues long in flower. It did not cease flowering this season the whole month of August; consequently was nearly a month longer in bloom than the others. It has a southern exposure, and is sheltered from the north and east.

Blight on Grain from the Barberry.—In the Chronicle of August 19, under the head of "Vulgar Errors," we read as follows: "People still maintain that the barberry blights their grain." This is, nevertheless, a matter deserving attention; for in this, as in many other instances, a popular prejudice has been founded on truth, although the real cause has been often overlooked. Some writers have treated this subject with respect, and among them is Dr. Thornton. The latter says that the "leaves are very subject to the *rubigo*, which will infect the grain in the neighborhood." Here the secret is at once explained, and the aversion of farmers to the barberry-bush at once justified. The vulgar notion is, that the barberry exercises some evil agency upon grain within a certain distance, and accordingly farmers will never suffer it to grow near their fields. They are right as to the effect, but they attribute it to a wrong cause. I have seen some remarkable instances of grain perishing in a semicircle, in front of a barberry-bush, and extending a good way into a field. Any one who has but superficially noticed the barberry, must have observed that the leaves and young shoots of the shrub were covered with a peculiar kind of blight or mildew. Now it is by no means extraordinary that this should be carried by the wind into grain-fields, and infect the grain so as to cause its destruction. This is the true explanation of the mischief caused by the barberry to grain in its neighborhood. [This is the common explanation, but if any one will take the trouble to examine the parasitical plant which attacks the barberry, and that of grain, he will find that they are totally different things. One is the *Æcidium Berberidis*, and the other some species of Uredo or Puccinia, for it is sometimes one and sometimes the other. We should as soon believe that a hen's egg would be hatched into toads, as that the seed of an Æcidium would produce an Uredo or Puccinia. We are aware of the facts mentioned by Mr. Wighton, for we have seen them ourselves, and they form a curious problem yet to solve.]

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, NOVEMBER 28, 1843.

ASHES, Pots,	per 100 lbs.	$4 62	to	$4 68
Pearls,	do.	5 12	“	5 18
BACON SIDES, Smoked,	per lb.	3½	“	4½
In pickle	do.	3	“	4
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	23 00	“	24 50
BARLEY	per bush.	52	“	56
BEANS, White	do.	1 12½	“	1 25
BEEF, Mess	per bbl.	6 00	“	7 00
Prime	do.	4 00	“	5 00
Smoked	per lb.	6	“	7½
Rounds, in pickle	do.	4	“	5½
BEESWAX, Am. Yellow	do.	28	“	30
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	12	“	15
Shipping	do.	6	“	10
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	32	“	38
Stearic	do.	20	“	25
CHEESE	do.	4	“	7
CIDER BRANDY, Eastern	per gal.	35	“	40
Western	do.	28	“	35
CLOVER SEED	per lb.	8½	“	9½
COAL, Anthracite	2000 lbs.	5 00	“	6 00
Sidney and Pictou	per chal.	7 00	“	7 50
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	56	“	58
Southern	do.	54	“	56
COTTON	per lb.	6	“	11
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	15	“	16
FEATHERS	per lb.	27	“	31
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush.	8 75	“	9 00
clean	do.	— —	“	— —
FLOUR, Northern and Western	per bbl.	4 56	“	4 75
Fancy	do.	5 50	“	5 62½
Southern	per bbl.	4 50	“	4 75
Richmond City Mills	do.	5 50	“	5 62
Rye	do.	3 00	“	3 12
HAMS, Smoked	per lb.	5	“	7½
Pickled	do.	4	“	6
HAY	per 100 lbs.	40	“	45
HIDES, Dry Southern	per lb.	9	“	11
HEMP, Russia, clean	per ton.	185 00	“	190 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	6	“	8
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	7
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 75	“	3 00
Corn	per hhd.	12 50	“	13 00
MOLASSES, New Orleans	per gal.	23	“	25
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	30	“	32
Southern	do.	26	“	28
OIL, Linseed, American	per gal.	75	“	80
Castor	do.	90	“	1 00
Lard	do.	55	“	65
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 00	“	2 25
Ground, in bbls	per cwt.	50	“	— —
PORK, Mess	per bbl.	10 50	“	11 38
Prime	do.	9 25	“	10 12
RICE	per 100 lbs.	2 75	“	3 12
ROSIN	per bbl.	65	“	95
RYE	per bush.	65	“	66
SALT	per sack	1 35	“	1 50
SHOULDERS, Smoked	per lb.	3	“	4½
Pickled	do.	3	“	4
SPIRITS TURPENTINE, Southern	per gal.	38	“	40
SUGAR, New Orleans	per lb.	6	“	7½
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	7	“	7½
TAR	per bbl.	1 25	“	1 50
TIMOTHY SEED	per 7 bush.	13 00	“	14 00
TOBACCO	per lb.	3	“	6½
TURPENTINE	per bbl.	2 62	“	2 87
WHEAT, Western	per bush.	1 00	“	1 05
Southern	do.	90	“	1 00
WHISKEY, American	per gal.	23	“	25
WOOL, Saxony	per lb.	35	“	50
Merino	do.	30	“	35
Half-blood	do.	25	“	27
Common	do.	18	“	22

New York Cattle Market—November 27.

At market, 1,150 beef Cattle, (110 from the south), 35 Cows and Calves, and 2,350 Sheep and Lambs.

PRICES.—*Beef Cattle* have slightly improved, and we quote $4.25 a $5 to $5.25 a $5.50 for the best. 1,101 unsold.

Cows and Calves.—All taken at $18 a $27.

Sheep and Lambs.—Sales of Lambs at $1 a $2, and of Sheep at 1.37½ a $3.50. 100 unsold.

Hay.—Sales at 62½ a 75 cents per cwt.

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REMARKS.—*Ashes*, since the late news from Europe, have been in good request. *Candles*, especially these made of stearic, are brisk. *Cotton.* The day after the arrival of the Caledonia with advices of a fall in England, this article receded nearly ¼ of a cent per lb.; but a brisk demand springing up for export, it has recovered, and is about the same now as before the reception of the late news. We hear nothing particularly new from the south regarding the picking, the weather upon the whole supposed to be more favorable. Export from the United States since 1st September last, 62,450 bales; same time last year, 113,301; same time year before, 99,904. *Flour.* The continued navigation on the canals, has brought us an unprecedented supply, and a large quantity has gone into store; a good business, however, continues to be done in it. The total arrivals this season have been 1,440,000 brls. *Rye-flour* is dull. *Buckwheat*, very scarce and advancing. *Corn-meal*, dull. *Wheat* is in good demand, and prices stiff. *Rye*, declining. *Barley*, *Oats*, and *Corn*, in fair demand. *Hemp*, dull. *Hops*, improving. *Molasses*, not much inquired for. *Beef* and *Pork*, quiet, and little doing at present in them. *Lard*, much wanted. *Hogs.* Extreme rates now in Cincinnati are from $2.25 to $2.75; we are free to repeat, however, that we believe the first quality of hogs will be worth $3 by Christmas. *Rice*, of the better qualities, scarce. *Seeds*, especially Timothy, in good request. *Sugar*, quite inactive. *Tobacco*, fine Kentucky, scarce and wanted; stems, none in market. *Wool* seems to have taken a fresh start again, and prices have an upward tendency.

Stocks. A large business continues to be done in these, and they are still gradually advancing.

Money plenty, and seeking investment at the usual low rates.

Real Estate seems at last to have come into demand, and considerable sales in this species of property have recently taken place at good prices. It must henceforth advance. Our population and wealth have increased in an unprecedented ratio within the past four years, and there is no reason why real estate should remain at its late low prices, and transactions in it any longer stagnant.

Business generally, the past season, has been extremely good; and we do not hesitate to say, few years can show a greater amount of substantial profits. We consider the days of darkness as passed, and we may now look forward to the future with the brightest anticipations.

Packing Pork.—On this subject we quote from the Cincinnati Chronicle of 22d November. For the benefit of our distant readers, who may be disposed to send their orders here for pork, we give below the pork-merchant's prices for *packing* this season, based upon 60 cents per bushel for Turk-Island salt, 87½ cents for bbls, 28 cents per bushel for Kenhawa fine salt, and 75 cents to $1.50 per day, for laborers. For receiving, weighing, and cutting the hogs, a block-fee of 5 cents each.

For packing per bbl., including all charges, $1.60 a $1.75. For salting 100 lbs. in bulk, including saltpetre for the joints, $1.62 a $1.75. Smoking per 1,000 lbs., including washing, $1.25. Rendering lard, 37 a 50 cents per 100 lbs., which does not include the price of the keg or barrel—2 to 5 cents is also charged on each keg or barrel, for nailing the hoops, boring, weighing, and marking. The cooperage is charged at cost.

TO CORRESPONDENTS.—A. B. Your package of Essays is sent to T. C. R. of P., as directed, and we have written you in full in it. The sheep-articles shall be condensed as you suggest, if we can possibly find room, and papers in any event sent to the gentlemen whose names are given. Good South-Downs, or Merinos, can be had from $10 to $20 each. It is not worth while to transport lower-priced animals such a distance. For Rambouillets, $30 to $50 each. See Mr. Collins' letter, Sept. No., page 166.

Henry A. Field, J. W. Stuart, S. B, Parsons, James Bates, and D. K. Minor, in our next.

ACKNOWLEDGMENT.—From some unknown friend, we have received a tin case containing two fine paintings of cattle, sheep, &c. We should be pleased to know to whom we are indebted for these, for no note accompanied them, and we can hardly guess.

BLACK GALLOWAY CATTLE.

A pure-bred imported cow, and a bull of the Galloway or Kyloe breed of Scotch Highland cattle, are for sale in this vicinity. These animals are very fine of their kind, and were chosen from one of the most celebrated breeders of this stock in Scotland. The cow took several prizes at the agricultural shows before being shipped to this country, and gives a superior quality of milk. The bull is quite equal to the cow, and they will be sold at a reasonable price.

Apply, post paid, to the Editor of this paper.

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The New Descriptive Catalogue, not only of Fruit, but also of Ornamental Trees, Shrubs, and Plants, cultivated and for sale at this ancient and celebrated Nursery (known as Prince's, and by the above title for nearly fifty years), with directions for their culture, may be had *gratis* on application to the new proprietors by mail, post paid. The collection at this establishment is unrivalled, and prices generally very much reduced: and the proprietors flatter themselves that the catalogue will be found to surpass in extent of information and usefulness, anything of the kind ever before presented to the public, and to be worthy of a permanent place in the library of the horticulturist. Orders will be promptly executed.

WINTER & Co., Proprietors.

Flushing, Oct. 24th, 1843.

A STOCK MAN WANTED TO GO SOUTH.

A planter, in the state of Georgia, wishes to engage a faithful competent man to take charge of his stock. If he be married, and his wife be a good dairywoman, she will also find employment. The situation is in the interior of the country, and *quite healthy*. None need apply if above middle age, or who have not had some experience in their business in this country, and can bring the best of references.

Address the Editor of this paper.

BUSINESS AGENCY.

The Subscriber will attend promptly to the execution of all orders for the purchase of stock, agricultural implements, or merchandise of any kind; also the negotiation of loans, sales of lands, payment of taxes, &c. He has been more or less engaged in mercantile pursuits in this city for ten years, and has an extensive acquaintance with moneyed men, and a thorough knowledge of business in general. Cash or produce must invariably be in hand, before orders for purchases can be executed.

A. B. ALLEN.

205 Broadway, New York.

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Saxton & Miles, Publishers, and dealers in Books in every department of Literature, at very reduced prices for *cash*.

S. & M. publish the following Book, which should be in every family in the United States: GUNN'S DOMESTIC MEDICINE, or the Poor Man's Friend.

Among the many publications of more than doubtful utility, with which our presses groan, it is pleasant to offer to the public one which, while it can not injure the mental and moral powers, is capable of improving our health and prolonging our days. It is now about ten years since this work was first published, since which time it has passed through many large editions, and the astonishing number of *one hundred thousand* copies has been sold in the southern and western states, and the demand is increasing.

It has just been revised and corrected, containing 960 pages, and executed in superior style. People may be disposed to smile when we tell them that they can save money by purchasing this book, but we think we can satisfy them that such is the fact. In every family more or less is paid yearly for doctor's bills. A child is taken with a fever, or some other complaint, and from ignorance nothing is or can be done effectually to check it. The physician is called, and a large bill is contracted; whereas, had GUNN'S DOMESTIC MEDICINE been on hand, a remedy could easily have been found which would have checked the disease in its first stage, and not only have saved the purse, but perhaps the life.

American Agriculturist Almanac for 1844.

This work comprises 64 pages, double columns octavo, with numerous wood cuts, price $8 per hundred, 12½ cents each. In the contents will be found—Agricultural Statistics of the United States—Aspects and Nodes—Astronomical Calendars for Montreal, Boston, New York, Philadelphia, Charleston, and New Orleans—Characters and Names of the Planets, &c.—Farmers' Northern Calendars, with particular directions for the management of the Farm, Cattle, Fruit and Flower Garden, &c.—Southern Calendars for the Planter and Farmer, with explicit directions for the culture and harvesting of Cotton, Rice, Tobacco, &c., &c.

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Published Monthly, each number containing 32 pages, royal octavo.

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Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume 1 of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster.

Communications for publication, to be directed to the Editor; and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway. New York.

STOCK FOR SALE.

R. H. Hendrickson & Co., of Middletown, Butler county, Ohio, will promptly attend to orders for Short-Horn Cattle, Bakewell, Merino, South-Down, and Saxon Sheep; also for Berkshire pigs from Windsor Castle, imported from England, and twenty choice Berkshire sows, a part of which were also imported. Windsor Castle stands 3 feet high, and is estimated by competent judges to weigh 1000 lbs. Pigs of crosses with the imported Kenilworth, the large Miami, Byfield, and Grazier stocks, will likewise be furnished.

None but choice specimens of any of the above stock will be supplied, and at prices corresponding with the times. Address, post paid, as above.

Oct. 12th, 1843. R. H. HENDRICKSON & Co

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THE AMERICAN AGRICULTURIST.

Agriculture is the most healthful, the most useful, and the most noble employment of Man.—*Washington.*

VOL. II. NEW YORK, DECEMBER 15, 1843. NO. XII.

A. B. Allen, Editor. Saxton & Miles, Publishers, 205 Broadway.

TO OUR SUBSCRIBERS.

The present No. of the American Agriculturist brings our Second Volume to a close, and we trust in reviewing it our subscribers will feel satisfied that we have accomplished all that we promised them in our last No. of the First Volume. Of the Editorial department, we have nothing to say, farther than we wish it had been in our power to make it better; but of the correspondence, we challenge any periodical, either in this country or in Europe, to show one equally varied and able. It spreads over the whole surface of our widely extended country; and however diversified its products, there is scarce one of any importance upon which it has not touched; and some of them it has treated more fully than they ever were before in any similar publication; and we are only repeating what has often been said to us, that our first and second volumes form the most complete work on the Agriculture of North America that has yet been published. So highly is our work prized, that in addition to the large list in the United States and the British Provinces, we have quite a number of subscribers in the West Indies, South America, and Europe; and these, as the work becomes known, are rapidly increasing.

The form of our paper is the most convenient possible for general reading, and alike admirable for binding; the beauty of the typography, engravings, and paper, is unrivalled. All these will be continued in our Third Volume, together with such improvements in addition, as the rapid progress of this enlightened age is constantly making. Situated in the great metropolis of America, to which everything tends, it enables us to first seize on all these discoveries, and keep this periodical in constant advance of any other published in the United States.

No. 1 of our Third Volume will be promptly issued on the 1st of January, and the succeeding numbers of the work follow on the first of each month. The January No. will be sent to all old subscribers, and we trust upon its reception, that we shall not only again be favored with their names, but that they will get as many of their friends and neighbors to join our list as possible. Our terms are unprecedentedly low: Single copies $1; Three copies for $2; Eight copies for $5; 62½ cents a year, or 5 cents a month, for a beautiful work of 384 pages large octavo!

When we reflect upon the amount of valuable practical matter thus annually given to the public in the American Agriculturist, we are struck with astonishment that every farmer on the continent is not a subscriber. We *fearlessly* and *soberly* assert, that, if the precepts inculcated in a single volume of this periodical were carried into full practice by the tillers of the soil, it would be the means of adding *millions* annually to the productive wealth of the country. To bring the thing home, individually, if any person subscribing for this paper, and faithfully perusing it, will come forward at the end of the year, and honestly say that he is not benefited *five*, yes, *ten* times the amount of such subscription, we will return him his money, and take back the work. We ask for nothing for which we are not sure we shall give back TEN-FOLD. Repeated instances can be adduced, where persons reading a single article in our paper have saved or been enabled to profit several dollars by it; and these are only isolated facts of its value.

By reference to our terms on the last page, it will be seen that subscriptions must be paid in *advance*. All agents in arrears will please forward the same without delay. Remit through Post Masters as the law allows. Any one can constitute himself an Agent by remitting us the amount for three or more subscribers, deducting the commission allowed by our terms.

Our circulation will undoubtedly be greater the present year, especially in the southern and western states, than that of any other agricultural periodical, and we respectfully call the attention of advertisers to this fact. We devote the greater share of two pages for admission of advertisements, for which the terms are very moderate.

Back volumes stitched in handsome paper covers, $1 each; bound in cloth, $1.25.

CLEARING FOREST-LANDS.

As we resided upward of seven years in the western country, part of the time *hutting it in a log cabin*, and nearly the whole of it actively engaged in clearing forest-lands, and bringing them into cultivation, we profess to know something *practically* of the subject upon which we are about to write.

There are several methods of clearing land, dependant entirely upon the price of wood and timber in the neighborhood of their location. Where these are valueless, except for the purpose of fencing the farm and making its buildings, the *slashing* system of clearing is usually resorted to. This consists in taking a very large tree for the centre, and cutting it off as nearly as is possible to do so without endangering its falling. Then begin and cut all the trees in a circle of a hundred feet or so from this centre, the same as the first, and in such a manner as to ensure their falling toward the centre one if possible. When the circle is thus cut, four men with their axes take opposite sides on the outside of the circle at the largest trees, and commence cutting on them till they fall, taking care that the four trees shall come to the ground as nearly as possible at the same time. These, in falling, generally carry all the other trees with them that they touch, and they again others; so that when the circle so cut has finished falling, nearly all the trees in this diameter of 200 feet will lie with their heads pointing to the centre, their butts out, and lapping each other like reversed shingles. Others cut the trees so as to fall in a line head to head, making them appear, when they get through chopping a swath, as if they had been raked into winrows. To lay the trees in circles or rows, requires both judgment and address; and none but experienced hands should undertake it, otherwise they will fail entirely in accomplishing their task. *Slashing* is also performed by cutting the trees and allowing them to fall as they please; but this is considered very unworkmanlike, and unless the wood and ground are very dry at the time of firing, it leaves many more logs to roll up into heaps for burning than either of the plans first mentioned.

Heavy log-rolling is not only an expensive, but an excessively laborious business, as we well know to our cost. We reckon it equivalent to digging rocks and laying stone wall; a business also in which we profess a trifle of experience. The extra number of logs usually left to be rolled after firing, let the trees be cut with all the address possible, is the greatest objection we have heard to the *slashing* system of clearing land, and although it saves labor in the first operation, unless the soil be a dry one, we would not recommend its being adopted. Where the soil abounds with clay, the land is tenacious in holding water, and if the forests growing upon it are *slashed*, the trunks of the fallen trees get so saturated with moisture, that scarce one summer in four will prove sufficiently dry to burn them. It will be necessary to let the trees slashed lie till the second summer after being cut, before they will effectually burn.

The second method of clearing land is, as fast as the trees are fallen, to cut them up into logs of convenient length, say 15 to 30 feet long, and roll them together, placing the largest at the bottom, and then pile the tops of the trees upon them, and burn when the wood becomes thoroughly dry.

The third method is to clear woodland for pastures. This consists simply in underbrushing the forest, and cutting out all the small growth, and such other trees as are likely to be prostrated in a high wind, and piling them in heaps and burning when dry, and then sowing grass seed and harrowing it in. Woodland pastures answer very well in the latitude of 40 degrees, and south, north of 40 degrees, the summers are usually too short for reserving woodland pastures to any great advantage, except the soil be calcareous, and blue grass comes in naturally.

Where wood and timber are valuable, the method we adopted in clearing the land, was first to completely underbrush and pile it; cut out the wood, split and pile that; and lastly, the timber, cutting up the tops of the timber trees if not suitable for wood, and piling them. After removing the wood and timber, and the top heaps and brush became dry, we burnt, thus leaving the land clean and fit for a crop.

Cost of Clearing.—We have paid various prices for clearing land; from $3 up to $20 per acre, dependant something upon how we wanted it done, and whether it was densely or thinly wooded. Perhaps $10 per acre may be considered an average price. We have occasionally bargained for clearing in kind; that is, we would give the wood or the timber standing upon it for the clearing, and sometimes both. If the parties clearing, cut and split the rails and made the fences, in addition to the wood and timber, we have occasionally added the free use of the land for a year or longer, according to circumstances.

Taste in Clearing.—We have often wondered at the almost total absence of taste in clearing lands, displayed by our countrymen. They usually commence on the line of the road and take a clean sweep through their farms to the back of them, where they make a small reservation of wood and timber for use. This leaves the land completely unprotected from the fervid sun in summer, and the cold searching wind in winter; and then the horrid stumps stand out in bold relief, staring one in the face with their black charred, or rotten punky sides, for half the age of man; making one of the most desolate and dreary sights we ever looked at. Nearly all this may be obviated, and even a new country recently cleared be made to assume a handsome, cheerful appearance, by proper reservations of the original forest. Suppose the farm 100 acres, we would divide it into five 20-acre fields; or if the size of 200 acres, into 40-acre lots, and in clearing, reserve a belt of trees around them from three to six rods wide. The advantage of these would be three-fold: 1. They would afford all the wood and timber necessary for the future use of the farm. 2. Shelter it from the rude blasts in winter, and give it shade for the stock in summer. 3. Hide the stumps and give a handsome, picturesque appearance to the country An occasional group of trees left near the centre of the field, especially where the land was highest, would also add to the beauty and variety of the farm. The only objection we have ever heard to such reservations were, that in narrow belts and small groups, the trees were apt to be blown down. This danger may be obviated by cutting out all the tall trees, leaving the shorter and younger ones only. Left in this manner, they shade and protect each other, spread out their branches and roots as they grow, and soon strike the latter so deep into the ground, as to enable them to stand against the strongest winds. Some of the handsomest farms in Europe are thus laid out into square fields, with belts of trees around them for shade and shelter, and the profit of the wood and timber. In order to obtain these the owners have been at great expense in planting them. We have only to leave what nature has already prepared to our hand, to equal these in picturesque beauty. We wish that the owners of wild lands would consider this subject, the sight of one such farm could not but convince them of the real utility, if no other motive were wanting of adopting this course of reserving belts of trees around the fields in clearing.

May, June, and July, are the best months for cutting forests; but this is a time that the farmer can ill spare for such work; necessity, therefore, compels him to do his chopping in the winter when he has little other employment. Firing the log-heaps should take place in dry weather, and when a gentle breeze prevails.

WINTERING SHEEP.

It is a prevalent notion among many of our farmers that sheep need no protection during winter, and will not do well if confined to yards. The contrary is the fact; and although it is better, perhaps, to give sheep more exercise than other stock, especially the Merino and South-Down breeds, yet they do very well in small yards, and require, at least, the protection of roofed sheds, open only on one side, and when it snows, such as can be closed all around. The sleet and rains of a northern climate, during the months of March and April, are worse for sheep than the snows of winter. Snow they easily shake off, and leave their fleeces dry;

not so with the rain. This penetrates to the skin of all but the Merino breeds, and superadded to the drenching overhead, when not protected, they are obliged to stand or lie down on cold, wet ground, than which, nothing can be more pernicious for sheep.

To prove that sheep will do well in much closer yards than they are usually accustomed to be kept in, when we were in Orange county, Mr. Pelton of Montgomery, showed us his sheep barn, 20 feet by 48, the under story of which he devoted for shelter to a flock of 70 sheep. On the south side of this is a yard, also 20 feet by 48, boarded up so close and high as to make it *dog-proof*. Here Mr. Pelton has kept his sheep for two winters, allowing them to go out twice a day to drink at a spring a short distance from the yard. He takes care to salt them regularly, and feed them well; and says, with this treatment, his flock has wintered better than he ever knew it to do before. We saw the sheep, and their appearance corroborated all that Mr. P. said of them. It has been proved by repeated experiments, that sheep, when sheltered, keep on much less food than when left to run at large; and when we consider the saving of fodder, their superior health and condition, and above all, their security from destruction by dogs, no humane man or good farmer will grudge a trifling outlay to properly shelter his flocks.

DURHAM HEIFER DAISY.—(Fig. 61.)

The Property of E. P. Prentice, Esq., Mount Hope, N. Y.

Daisy is out of Matilda, by Leopard. She won the gold medal at the Show of the American Institute, October, 1840. The artist has unfortunately made her limbs disproportionately fine, and not done her exact justice in other respects. To our eye she shows much better in the yard than in print, and is now a handsome full-grown cow.

FARM OF MR. WILLIAM K. TOWNSEND.

This farm is situated on Prospect Hill, about 3 miles from New Haven, and the principal part of it lies sloping to the bay on the east side, a short distance from the old fort. It consists of 170 acres, 45 of which is salt meadow, 15 woodland, and the balance arable. Mr. Townsend came into possession of this farm about 14 years ago. It was then in a very neglected state, with scarcely a comfortable building of any kind upon it; the fences all down, and much of the land overrun with bushes. The meadows averaged less than one ton of hay to the acre, and the other crops were proportionably meager. It had been regularly skinned, and if a tenant brought the year about upon it and paid a small rent, it was all that was expected, and he had hard work even to do that.

Upon moving on to this unpromising place, the first thing undertaken by Mr. Townsend, was to cut down the bushes and grub them up; drain the pond holes and wet places; and then pick up the stone, and all the spare time which could be had from other duties, employ it in relaying the old fences and constructing new ones. At the same time he put the half-starved stock on the place into good condition, and then commenced making manure, by gathering together all the rubbish to be found on and about the premises, sea-mud on the beach, &c., and place them in his barn-yard. In this way, the second spring after occupancy, he had a large compost heap of about 200 cart-loads, with which to commence enriching his land.

ROTATION OF CROPS.—Mr. Townsend decided upon keeping a herd of about 20 cows for the purpose of sending milk to New Haven; milk, therefore, is his main crop, and for the production of this and keeping a few pigs for sale, he adopts his rotation.

The first year from 20 to 50 loads of manure are carted on to a sod field, spread broad-cast, and then plowed under. This is usually planted with corn, and manured in the hill with a small quantity of ashes, poudrette, or rotted stable manure. This gives the crop a good start till the roots reach the manure plowed under, which, together with the decomposing sod, keeps it rapidly growing. At the time the ears begin to form, a handful of ashes or plaster is spread on each hill, for the purpose of assisting to perfect the seed, and make the crop fuller and more abundant. As soon as glazed, the corn is cut up and bound into small stocks, and husked at leisure. Mr. Townsend prefers the variety for planting which not only yields a good ear, but rather a slender stalk, as he finds small stalks full-leaved make better fodder, and are eaten up much cleaner than the larger kinds. Such was our own practice when farming, and we do not think sufficient attention is paid to this important part of the corn crop. With this system, 70 to 75 bushels of shelled corn per acre is not an uncommon yield with Mr. Townsend.

The second year, the land is manured at the rate of 20 loads to the acre, spread broad-cast and planted with potatoes. The yield is from 200 to 250 bushels per acre. If these can be got off in season, the field is sowed with rye in the fall, and if not, with barley or oats in the spring. With the grain, the land is seeded down to grass, at the rate of 12 quarts of timothy, 4 quarts of red top, and 4 quarts of clover per acre. The meadows are usually mowed four years, and then pastured two years. They get an occasional top-dressing of compost in the fall, together with plaster in the spring, at the rate of from one to three bushels per acre; and although the land lies upon the Sound, and is constantly exposed to sea air, as remarked in our November No., the plaster has a very beneficial effect. The meadows are usually moderately pastured in the fall, but never in the spring.

In addition to the above crops, Mr. Townsend annually sows a patch of turneps, and plants an acre of pumpkins. This last crop is produced by heavily manuring broad-cast, a piece of sod, and then turn it flat over. The hills are further enriched with hog manure, placed 10 feet apart, and two vines only left in each. An acre thus cultivated produces from 15 to 25 large cart-loads of pumpkins, which prove excellent food for milch cows. The apple and peach orchard of well-selected trees, occupies 10 acres, and is a source of some income; all the refuse fruit is fed to the pigs.

STOCK.—Mr. Townsend finds the Durhams and their grades make the best milkers, and in selecting these, he has had reference to such as stand well to the pail. Some of his cows will, if he wishes it, give milk from calving to calving again, though, for fear of injuring the growth of the fœtus, he usually lets them go dry from one to two months. His grade steers prove excellent working cattle, and when turned out to fatten take on flesh remarkably well. He showed a pair of the largest and finest animals two years since, at the American Institute, we believe that were ever exhibited in this city. We saw a pair of Durham bulls at work here, famous fellows, that would go along comfortably over the farm with a three-ton load.

BUILDINGS.—Soon after coming on to the farm, Mr. Townsend commenced erecting new buildings, which are not only handsome, but roomy and very convenient. His piggery is an excellent model to copy after, as well as the barn and stables. Every animal on the farm has a stall for itself at night in winter, and a good yard to exercise in by day. By keeping so much stock, and feeding all his produce at home, large quantities of manure are made here where formerly scarcely any was produced. If we recollect right, Mr. Townsend informed us he now makes 300 loads of manure per annum entirely from the resources of his own farm, and he meant to continue increasing his stock of it, and go on improving the land, till he can get 3 to 4 tons of grass per acre, and other crops in proportion. We think that making manure from the resources of one's own farm, is little understood as yet in this country. By properly stocking our land, draining it, and adopting a judicious rotation of crops, we are confident that there are few farms which may not be placed in an improving condition without foreign aid, and at the same time be paying a fair interest on the first investment. Such has been the case with Mr. Townsend, he not only improving his farm and his stock at the same time he was making money from it. Success we say to such laudable ambition, and may this example be followed by others.

Tour in England. No. 16.

Culture of Wheat.—One of the most pleasing sights which presented itself to our view in traversing England, was the large fields of wheat which we encountered in almost every direction, and the great average product per acre, from land that in our own country would be considered quite inferior. In case of a partial failure of this crop, the farmers of Great Britain have not, like those of America, that excellent grain, the Indian corn, to fall back upon for bread-stuffs; they have consequently a more powerful motive than we, in addition to their higher prices and greater density of population, to stimulate them to raise as large a quantity of wheat as possible. To this end, therefore, the rotation of all their crops tend—wheat as often and as much of it per acre as can be produced, consistent with keeping up, or rather at the same time improving the fertility of the land.

In our intercourse with some of the English farmers, we found them sufficiently sanguine in believing, that land might be so managed as not only to double the present average yield throughout the kingdom, but also to make it produce wheat for years in succession, without deteriorating the quantity or quality of the grain. It is impossible to say what science may yet do for agriculture; for certain it is, that by use of a compound of those manures which are known to be the best food for the plant, five consecutive crops of wheat have been taken from the same field, the amount annually increasing from 20 bushels the first year, up to as high as 50 bushels the last, of an excellent quality of grain; and single acres have been made to produce from 76 to 82 bushels. This last amount is a trifle more than has ever been grown to our knowledge in America, the highest record of which is at the rate of 78¾ bushels per acre. We only state these as mere examples of what can be done in increasing the production of wheat; nor is it more astonishing than obtaining from 150 to 190 bushels of Indian corn per acre, as has been recently done. The mind of the American farmer has not yet been turned so much to the production of large crops of wheat, as it has to that of corn and some other things; yet we are confident the moment it is, we shall see as large a yield recorded in the United States of this invaluable grain per acre, as in Great Britain. But leaving what perhaps may be called fancy crops to take care of themselves, we shall proceed to the general method of the culture of wheat in England.

The first requisite is to have the land in good heart. A root crop bountifully manured always precedes wheat; or else clover, tares, or some kind of grass fed off by sheep. To be preceded by a white crop, (grain of any kind, such as barley, oats, &c.,) is considered bad husbandry, as the food in the soil necessary for the production of the wheat in perfection, would be more or less taken up by the oats or barley. Peas or beans may be succeeded by wheat, these not being considered a white crop. In his seed, the English farmer is more careful to select the best varieties than we are; he also uses a larger quantity per acre, and generally drills it in instead of sowing it broadcast upon the land. We think this quite an improvement; for by standing apart in rows from 9 to 12 inches, the wheat tillers better and more easily rids itself of an excess of moisture, the sun penetrates with greater facility among the stalks, and the air circulates more freely among it: the agitation of the crop by the wind is known to be an excellent preventive to rust and mildew. Another important consideration in sowing in drills is, that where labor is so cheap the crop can be hoed and wed out in the spring, which adds to its increase, and prevents the growth of weeds. The general amount of crop under this system of cultivation, we found to run from 25 to 40 bushels per acre; perhaps the average might be 30 bushels. The average yield of all England we think must now be full 20 bushels per acre; while that of our own country has been carefully estimated not to exceed 10 or 12; a disparity, considering our rich virgin soil, not much to the credit of our present system of farming.

Cradling wheat is not so common a practice here as with us, the sickle being preferred by the laborers to the scythe. During harvest-time, large bodies of Irish laborers come over to England for employment, the men and women working indiscriminately together; the only difference being that the women do the binding and setting up the sheaves. It is a pretty merry time with all at this season, English, Irish, or Scotch; and wherever one passes over the country, he hears the jocund song and uproarous laugh, from the numerous bands which dot the harvest-fields in motley groups.

After reaping, come the gleaners; usually superannuated old men, or women and children. It is astonishing what numbers turn out for the scanty pittance they thus earn, painfully toiling to gather up every head and straw which the binders have left behind them. In coming up to London from Cambridge, we counted 171 gleaners in a single field not exceeding 12 acres, and upon expressing our surprise at this occurrence to a fellow-passenger in the coach, he assured us he had repeatedly seen from 400 to 500 persons in an area perhaps not more than twice the size of the one just passed; and so great was the want of employment in the country, that it was found necessary to pass a law, confining the benefit of gleaning entirely to the people of the parish where the field was situated. This argues a sad state of things for the laborers of the country; for we doubt whether the average gains per day, in gleaning, were over 15 to 20 cents, and it must be recollected that they had their own food and raiment to provide for. Still the people, generally, looked healthy, and it was gratifying to see them return from the fields at night, bearing their gleanings in twisted bands arranged in large bundles on their heads and shoulders. Among these might occasionally be seen fine blooming girls, reminding one of the tale so beautifully told in Thompson's Autumn.

"The lovely young Lavinia once had friends,
And fortune smiled, deceitful, on her birth."

NEW YORK FARMERS' CLUD.

THE semi-monthly meeting of the Club took place on Tuesday the 20th November at 12 o'clock, M., at the reading-room of the repository of the American Institute in the Park; William J. Townsend, Esq., in the chair.

Mr. Wakeman presented a paper by Mr. Boswell of Philadelphia, on the subject of grafting, and proposing a plan for extending the cultivation of choice fruits as follows:—

1. Make a collection of *choice scions* of apple, pear, &c., during the months of February and March, and keep them at the Repository of the American Institute. 2. When the proper season arrives, employ some well-known practical nurseryman to *teach in a particular manner* the operation of engrafting. 3. By the above means, young men can go into the country with a knowledge of the business, taking with them the *choicest varieties of fruits* in the Union.

Mr. Boswell, who was present, stated that he had established a *system of exchanges of fruit scions*, and will furnish the Institute with those of the choicest kind—from Boston to Cincinnati.

During July and August, choice varieties of plum, cherry, peach, apricot, and nectarine, can be collected, and some nurseryman employed to *teach budding and inoculation.*

Mr. Meigs said that Mr. Pell, of Ulster county, made a statement at the Repository, relative to his experimental farming, from which it appeared that he had found benefit from the use of oyster-shell lime—using 300 bushels per acre. That in addition he had employed 52 bushels of charcoal per acre. That on this charcoal dressing he obtained last summer at the rate of *seventy-eight bushels and twenty-four quarts* of wheat per acre. That he had cut wheat two or three weeks sooner than his neighbors; when the root of the straw began to turn brown, and when by the pressure of the finger and thumb on the grain, its milk would fly out. That this wheat weighed 64 pounds per bushel. That he sold it for seed at one dollar per bushel, when ordinary wheat was 87 cents. That he cut clover and housed it on the same day—sprinkling about a bushel of salt over every load. That this clover retained its green color, and was preferred by cattle to that saved in the old way. That he had 20,000 apple-trees in full bearing. That in dry weather he had applied lime freely at the roots—found that this preserved the verdure and growth, when the neighborhood was much injured by drought. That he dipped a sponge in ammonia, and applied it to the worm-nests on his trees, which banished them completely. That he has sent to market *four thousand* barrels of apples, many of which go to London, and there sell for $9 per barrel. That he employed a man from Vermont to engraft 10,000 apple-trees for $150. That this man brought a company of men of whom two sawed off the proper limbs, two more made the incisions (two of them) in the bark, two more inserted the grafts, two more applied a compost of wax, tallow, and rosin. That out of the 20,000 grafts few failed.

Col. Edward Clark stated that charcoal suffered no diminution in its use for vegetation.

Dr. Milhau stated that it takes and retains the ammonia.

The chairman remarked that 52 bushels of charcoal would nearly sprinkle an acre.

John D. Ward stated that charcoal-pits give fertility for 50 years. That such spots are called *coal-bottoms*, and are remarkable for vigorous vegetation.

Mr. Townsend said that the *effect was due to the ashes!* He had often noticed it—that a spot where pure charcoal was, received no fertilization. It was the *alkali* merely that did it.

Mr. Carter said that good fruit ought to be introduced among all farmers; that some time ago, some person who was about migrating to the new lands bought 400 trees at Newark—natural fruit-trees—took them to New York in September, set them in a garden, where they began to vegetate; took them up for the winter, and put them in a cellar in earth—took them by a stove in winter, and grafted them—sent them to the new lands in the spring. Mr. Carter saw them this summer; they were the finest pippins in that country.

Mr. Meigs made some remarks on carbon—that it is charcoal; all vegetables burned give it; it is the essential principle of vegetable life; that the experiments of Sir Isaac Newton on the refraction of light caused him to place diamond, amber, oil, and charcoal, as all purely carbon—same as vegetable matter; that Guyton Morveau made steel by using *diamond dust on iron;* that Davy found that the fertilizing soil lost no weight by sustaining vegetation; that a hundred pounds of soil would grow a plant from one ounce to a hundred pounds, and lose nothing of weight.

Mr. Wakeman presented Bommer's Treatise on Manure. Committee appointed to examine it.

Mr. Meigs read the report of committee on Dr. Underhill's vineyard at Croton Point, consisting of twenty acres of Isabella and Catawba grapes, bearing as much fruit as the Doctor pleases to allow the vines to maintain, recommending the highest honor of the Institute to be given to that meritorious citizen. His farm contains, moreover, 1,700 apple-trees, 2,700 peach-trees, and some of the very finest quinces ever seen by the committee; his apples sell readily here at $5 a barrel, so fine are they.

Mr. Bowen presented several of the high-cranberry trees from Lake Umbagog, in the state of Maine. They are beautiful and abundant bearers; grow in marshy grounds.

Mr. Browne presented a memorial to Congress relative to American timber. Read and referred to a committee.

Col. Clark stated that old fruit-trees can be much renovated by proper care; suggested some of the proper means.

Several other matters were discussed, when the Club adjourned at 3 o'clock, P. M., to meet at the Repository of the American Institute on Tuesday the 12th of December, at 12 o'clock, M.

AGRICULTURAL SHOWS.

Planters' Club of Hancock, Georgia.—The Southern Cultivator comes to us freighted with the details of this show. It was held at Sparta November 3d and 4th. There were a large number of persons present of both sexes, and the quantity of stock on the ground seems rather extraordinary for that section of the country. Fine blood horses as a matter of course; Durhams, Ayrshires, and Patton cattle; South-Down sheep, and Berkshire pigs. In these last, we find Col. Bonner of White Plains made a numerous and superb show; Captain Hardwick of Sparta, also exhibited some very fine specimens. Georgia has taken a high stand in breeding Berkshires, and if we are not careful she will yet go ahead of New York in her improved breed of swine. Captain Hardwick seems to have taken precedence in Durhams and South-Downs; and Messrs. Dickson, Neal, and Lamar, in horses. The ladies came in with a handsome and numerous display of domestic fabrics, manufactured with their own hands. We like to see such things, and there is no fear of the country, so long as the ladies head its domestic manufactures.

The Agricultural, Horticultural, and Botanical Society of Jefferson College, held its annual show at Washington, Mississippi, November 1st and 2d. The Concordia Intelligencer contains a full report. Mr. Affleck, of Washington, on the first day delivered an address on the nature and Structure of Plants, with reference to practical Horticulture, which is highly spoken of. Mr. Fletcher made an address on the second day, which was listened to with great interest. The show then commenced, when horses, cattle, sheep, and swine of most of the improved breeds were exhibited in considerable numbers, proving conclusively, that they can live there and do well, if proper attention be paid to them. Dr. Lovelace of Wilkinson, exhibited superior specimens of cotton, approaching in appearance the Sea-Island. This cotton is a hybrid, produced from a cross of the Mexican varieties, and according to Dr. L.'s statement,

1. In its general aspect resembles the common Mexican cotton. 2. It bears as many bolls. 3. The bolls are as large. 4. They open as early. 5. They expand well. 6. The cotton is easily picked from them. 7. Yields as much to the acre. 8. About 80 bolls on an average yields one pound. 9. The lint is easily separated from the seed. 10. It nets from 33 to 36 per cent., which is more than any cotton yields which he has examined.

There was a good display of other things usual upon such occasions, especially of domestic manufactures. Col. Wailes having served the society as President several years, declined a re-election, and was succeeded by William J. Minor, Esq. This society has been the means of accomplishing much good in that part of Mississippi, and we see no falling off in the interest and spirit of its proceedings.

To Prevent Cream Frothing when Churning in Winter.—Before commencing churning, let the cream be equally warmed to a temperature of 55 degrees, and gradually approach during the churning process to 65 or 70 degrees. Cream will rarely froth at this temperature, and it also facilitates the coming of the butter. The cream may be warmed by standing near the fire, by a can of hot water placed in it and stirred about, or by pouring warm water into the churn. We prefer the first or second method. A small quantity of salt thrown into the cream will also prevent its frothing.

Salt Destructive to Insects on Plum-Trees.

A correspondent of the Boston Cultivator, recommends 2 quarts of salt to be put around each plum tree 6 inches from the trunk every year as soon as the ground is frozen. "Put on in the winter, it works into the ground by degrees, and becomes diffused through the soil before vegetation commences, and it is then taken up in a suitable portion by the small roots, and is circulated with the sap through the tree, leaves, and fruit, and insects are so averse to salt, that they will not take it if they can get fresh food.

"By this means I have been able to obtain good crops of plums while others have lost both fruit and trees by insects. As a proof of the utility of salt applied to plum-trees, Mr. Pond, who cultivates land once overflowed with salt water, never fails to obtain good crops of plums, and Mr. Jones, who has a plum orchard and an asparagus bed on the same ground, which he covers with salt mud, never fails to get a good crop, and his trees and fruit are perfectly free from disease.

"I have known several persons to try this who had good crops by the use of salt, while the fruit of the adjoining gardens all fell off."

LECTURES ON AGRICULTURAL CHEMISTRY.—It will be seen by the advertisement of Dr. Gardener, that our citizens are now to be favored with a series of lectures on that science, which is at length beginning to attract more attention both in Europe and America than any other—we mean the science of Agriculture.

Dr. Gardener, we are informed, has been several years a practical farmer, was a student under that celebrated botanist Professor Lindley, and received his chemical information from Brande and Turner. He lectured for some time on Chemistry and Botany, at one of the oldest Colleges in Virginia, and is now engaged to deliver a series of popular lectures at the Rutgers Institute of this city.

His first lecture will be delivered at the University on the 27th inst., at 7½ o'clock, P. M., and we earnestly hope that all who are seeking to improve themselves in the principles of agriculture will attend. We find several of our most respected citizens already subscribers to this course.

OUR JANUARY NO., THE FIRST OF VOLUME THIRD, will be the richest paper ever yet issued from an Agricultural press. It is already nearly printed, and only waits the arrival of the steampacket with Foreign News, when it will be promptly issued. The correspondence is uncommonly able and varied, and very fairly represents the North, East, South, and West, of this great country. We really feel under a load of obligations to our friends who have come forward so promptly in our behalf, and we shall take great satisfaction in requiting their favors in any way in our power. Our paper is meeting with unexampled success, and in its circulation, as it has in all other matters, it will henceforth take precedence. Payments for the Third Volume are already coming in rapidly. This is right. Recollect to remit through the Post-Masters as the law allows.

LIST OF PREMIUMS

Of the American Institute.—Concluded.

AGRICULTURAL PRODUCTS.

George Chesterman, Harlem, N. Y., for forty ears of fine white Indian corn—Two volumes American Agriculturist.

S. Van Valkenburg, Harlem, N. Y., for forty ears of fine yellow corn—Two volumes Transactions State Agricultural Society.

Nathan Coleman, Poughkeepsie, N. Y., for a bushel of superior white flint wheat, weight 64 pounds—Silver medal.

R. L. Pell, Pelham, Ulster Co., N. Y., for a bushel of extra fine rye, weight 60 pounds—Four volumes of the Cultivator.

Mrs. S. Campbell, Springfield, N. J., for a bushel of fine oats, weight 43 pounds—Planter's Guide.

James Depeyster, Flatbush, L. I., for superior Egyptian corn—American Agriculturist.

Tunis Bell, Piermont, N. Y., for fine specimens of white Indian corn—Farmer's Mine.

J. Q. Underhill, Secaucus, N. J., for fine specimens of mammoth Indian corn—Farmer's Mine.

Hiram Smith, Wheatland, N. Y., N. H. Wolf, 17 South street, N. Y., agent, for the best wheat-flour—Silver medal.

Hecker & Brothers, 245 Cherry-street, N. Y., (Croton mills,) for the second best wheat-flour—Diploma.

Hecker & Brothers, 245 Cherry street, N. Y., (Croton mills,) for superior unbolted, or Graham flour—Diploma.

W. H. Imlay & Co., Hartford, Conn., for superior rye-flour—Silver medal.

SILKS—RAW AND MANUFACTURED.

W. J. Cantelo, Weehawken, N. J., for the best cocoons and raw silks—Gold Medal.

Albert P. Heartt, Troy, N. Y., for the second-best cocoons—Diploma.

Lucius Carey, Moreau, Saratoga Co., N. Y., for the second-best raw silk—Silver Medal.

Northampton Association of Education and Industry, for specimens of raw silk—Diploma.

Luke A. White, 15 Whitehall street, N. Y., for a specimen of raw silk—Diploma.

F. Trowbridge, Flushing, N. Y., for a specimen of raw silk—Diploma.

Ephraim Montague, Belchertown, Mass., for a specimen of raw silk—Diploma.

W. J. Cantelo, Weehawken, N. J., for winding-racks for cocoons, a very useful article—Diploma.

William Haydon, 9th Avenue, and 27th street, N. Y., for superior silk-dying—Diploma.

New England Silk Co., Hartford, Conn., for the best black and colored sewing-silk—Silver medal.

Northampton Association of Education and Industry, for the second-best sewing-silk—Diploma.

Haskell & Hayden, Windsor, Conn., for superior colored spool sewing-silk, (gold medal having been before awarded,)—Diploma.

John W. Gill, Mount Pleasant, Ohio, for the greatest variety of manufactured silk goods—Gold medal.

Timothy Smith, Amherst, Mass., for a piece of plain drab silk—Silver medal.

Murray & Ryle, Paterson, N. J., for ladies' and gent's cravats, and twilled silk handkerchiefs—Gold medal.

John Denmead, 137 William-street, N. Y., for silk gimps, silk-wire, and coat-binding—Silver medal.

Mrs. Mary Beach, Newark, N. J., for a pair of white silk hose—Diploma.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

OLD AGRICULTURAL WRITERS.

"Samuel Hartlib, his Legacy of Husbandry, wherein are bequeathed to the Commonwealth of England, not only Braband and Flanders, but also many more Outlandish and Domestick Experiments and Secrets, (of Gabriel Plats and others,) never heretofore divulged, in reference to Universal Husbandry. Psal. 144, 5, 'That our garners may be full,' &c. London, 1655."

We had the pleasure of introducing to the readers of the first volume of the American Agriculturist, one of the most approved and standard authors of the early times of English written husbandry, Barnabe Googe, published in black letter, in 1578. We here have, as the subject of our present quotation and brief remarks, a writer of nearly 80 years later date, and it is curious to note the modernizing effect of this comparatively short time, in the more rational and practical ideas imbodied in systematic husbandry. The former partakes of all the marvelousness and extravagance of the middle ages, while the last, with some few exceptions, has shaken off to a great extent, the wizard veil, that obscured and distorted the common operations of nature. Comparatively little progress had been made in unlocking her mystic stores, and revealing to the gaze of mankind, what has been exhibited to such an unlooked-for and amazing extent within the last half century, by the almost inspired efforts of scientific explorers. Yet one great point had been gained, in the rejection of those hobgoblin and spectral hallucinations, that blurred and blotted to their mental vision, almost all the secret or misunderstood laws that governed inorganic matter, and the vegetable and animal creation. Having taken this first step in the highway to wisdom, the unlearning their errors, their progress was thereafter certain, though slow, and the result we witness at the present day, is but the natural conclusion of what was to have been anticipated from this first indispensable movement. It is the accelerated momentum, the focal intensity of rays concentrated from every scientific luminary, that has poured its benignant beams on a benighted world.

The observations respecting soils, modes of tillage, crops, implements, domestic animals, &c., &c., are generally correct and sound; as far as they go, and might with great propriety be introduced to modern farmers, as worthy their perusal and attention. As the limits of the American Agriculturist will not permit extensive reference, or large quotations from the work, our notice of it will be necessarily brief.

One of the first objects of our author's attention, is the introduction into his own country, of valuable seeds, and modes of tillage, from abroad, as is purported in the title; he having travelled extensively, and noted accurately the husbandry of other countries. This is an object every way worthy of the attention of our own countrymen at the present time. His suggestions for the improvement of implements, we are happy to see our ingenious and enterprising mechanics of the present day are acting on with great success. He says in reference to this subject: "I wonder that so many excellent mechanics who have beaten their brains about the *perpetuall motion,* [not quite done with in our generation,] and other curiosities, that they may find the best way to ease all motions, should never so much as honor the plough (which is the most necessary instrument in the world) by their labors and studies. It would be an extraordinary benefit to the country, if that 1 or 2 horses could plough and draw as much as 4 or 6, &c. Lately in Holland a waggon was framed which with ordinary sails, carried 30 people 60 English miles in 4 hours. I know some excellent scholars who promise much by the means of horizontal sails, viz., to have 3 or 4 ploughs together, which shall also both sowe and harrow without horses or oxen." As this last feat has not been performed, we may charitably conclude the scholars were mistaken in the modest estimate of their abilities. Yet the power of *steam,* then unconjectured, has done vastly more for labor, than the power of wind, at that time so largely relied on.

Even at so early an age, sowing wheat, barley, &c., in drills, was strongly urged, and for the same reasons that induce its practice at the present time. As to "the causes of smuttiness," our author says most rationally, "I desire not to fetch causes afar off, and to tell you of the sad conjunction of Mars and Saturn, (for I think quæ supræ nos belong not to us,) when as we have enough at home; which are various," &c. Brine and lime were the remedies then adopted for it. Sowing early was recommended to avoid mildew. It is a good practice in the nineteenth century.

The English were later in the general introduction of gardening than is usually supposed. Our author says, "About 50 years ago, about which time *ingenuities* first began to flourish in England, the art of gardening *began* to creep into England, into Sandwich, and Surrey, Fulham, and other places." Much pains were taken to introduce the cultivation of the grape, and the manufacture of wine in England, ever since the conquest of the island by the Romans, and it is insisted on strongly by Hartlib, and for proof of the capabilities of the soil and climate for its production, he cites several notable instances. But experience has taught the islanders, that although partial success has crowned extraordinary efforts for this object, they can produce their wine much more sucessfully, by their crops of wheat and turneps, and in their work-shops of Manchester and Sheffield, and their *ocean husbandry.*

Plowing in manure is strongly urged, and very properly too, and frequent plowing insisted on. For the last rule, this reason is given, "that the sun and dew engender a nitrous fatness, which is the cause of fertility. I have seen ordinary dung on dry lands in dry years to do hurt, and it oft causes weeds and trumpery to grow."

Nearly all the modern manures are recommended, and New England is quoted for the good effects of *fishing* the ground. "In April there cometh up a fish to the fresh rivers called an alewife because of its big belly, and is a kind of shade full of bones;

these are caught, and one or two cut in pieces put in a hill when their corn is planted, called Virginia wheat, and it causeth fertility extraordinary for two years, especially the first; for they have had 50 or 60 bushels to the acre, and yet plough not their land, and in the same hills doe plant corn for many years together, and have good crops, besides an abundance of Pompions and French or Kidney Beans."

In Holland, even at that early day, all the urine from every source was carefully saved and applied to the land. "Columella saith, that he is an ill husband that doth not make 10 loads of dung for every great beast in his yard, *and as much for every one in his house.*"

After enumerating 23 methods for enriching soils, he quaintly though ingenuously adds, "Lastly, To conclude, I may adde as a main Deficiency, that though we may by experience find that all the foresaid Materials, and divers others, as ofttilling, Husbandry, seasons, &c. change of Seed and Land, resting of Lands, fencing, &c. do cause Fertility; yet we are very ignorant of the true causes of Fertility, and know not what Chalk, Ashes, Dung, Marle, Water, Air, Earth, Sun, &c. do contribute: whether something Essential, or accidental; Material, or Immaterial; Corporal, or Spiritual; Principal, or Instrumental; Visible, or Invisible? whether Saline, Sulphureous, or Mercurial; or Watry, Earthy, Fiery, Aereal? or whether all things are nourished by Vapours, Fumes, Atoms, Effluvia? or by Salt, as Urine, Embrionate, or *Non specificate?* or by Ferments, Odours, Acidities? or from a *Chaos*, or inconfused, indigested, and unspecificated lump? or from a Spermatick, dampish Vapour, which ascendeth from the Centre of the Earth, or from the Influence of Heaven? or from Water onely impregnated, corrupted, or fermented? or wheather the Earth, by reason of the Divine Benediction hath an Infinite, multiplicative Vertue, as Fire, and the Seeds of all things have? or whether the multiplicity of Opinions of learned *Philosophers*, (as *Aristotle*, *Rupesc*, *Sendivog*, *Norton*, *Helmont*, *Des Cartes*, *Digby*, *White*, *Plat*, *Glauber*,) concerning this subject sheweth the great difficulty of this Question, which they at leisure may peruse. I for my part dare not venture on this vast Ocean in my small Bark, lest I be swallowed up; yet if an opportunity presents, shall venture to give some hints, that some more able Pen may engage in this difficult Question, which strikes at the root of nature and may unlock some of her choycest treasures. The Lord *Bacon* hath gathered stubble (as he ingeniously and truly affirms) for the bricks of this foundation; but as yet I have not seen so much as a solid foundation; plainly laid by any, on which an ingenious man might venture to raise a noble Fabrick: I acknowledge the burthen too heavy for my shoulders."

The reason for the early neglect of farming in England is broadly enough given. "In the times of Papistry, all in this Island were either Souldiers or Scholars: Scholars by reason of the great honours, priviledges, and profits, (the third part of the Kingdom belonging to them) and Souldiers, because of the many and great Wars with France, Scotland, Ireland, Wales. And in those times Gentlemen thought it an honour to be carelesse, and to have Houses, Furniture, Diet, Exercises, Apparel, &c. yea all things at home and abroad, Souldier-like: Musick, Pictures, Perfumes, Sawces, (unlesse good stomacks) were counted, perhaps unjustly, too effeminate. In Queen Elizabeth's dayes, Ingenuities, Curiosities, and Good Husbandry, began to take place, and then Salt-Marshes began to be fenced from the Seas; and yet many were neglected, even to our dayes." If we substitute indifference, carelessness, idleness, extravagance, and *speculation* for the "souldiers and scholars" of those days, we shall have the great causes of our own deficiencies at the present time.

It is instructive to note the strenuousness with which *manufacturing* was insisted on as adding to the profit of agriculture. "Formerly we were so unwise as to send our wool to Antwerp, and other places where it was manufactured, *by which means one pound often brought ten unwrought to them*, but we now set our own poor to work and so save the depopulation." Our late tariff is doing more for the profits of agriculture among us now, than all the improvements in agriculture for the last century, by affording a profitable market for its products; whereas, before, it was borne down by the very success of its efforts; the excess of products vastly diminishing its profits.

Our author laments that, "its a great deficiency here in England that we have no more Bees," and adds, "they thrive very much in New England." He recommends not destroying them to get their honey, but "drive them once or twice a year as they do in Italy, where a law was made that none should destroy a swarm of Bees, unless he had just cause, accounting it extream injustice and cruelty to take away both goods and lives of such good and faithfull servants." We here see that modern hives are but the revamping of old ones.

Raising silk-worms is strongly urged. Hartlib says: "In Virginia the silk-worms are found wilde amongst the mulberry woods, and might be managed with great profit in those Plantations if hands were not so scarce and dear." Now that they are both plenty and cheap, we trust our southern friends will set about their production in good earnest. Although our author says nothing about the spontaneous production of swarms from a *dead steere*, a process so elaborately related by Googe for the benefit of such as have more beef than bees, yet he sagely conjectures, that "this silkworm of Virginia is produced by the corruption of the mulberry tree, as Cochinneal, from *Ficus Indica*," the Indian fig-tree. This superstition of spontaneous insect production, is not dead yet, for we found last season, the head-man of one of our most intelligent North river agriculturists, a worthy Welshman, attributing the worm in wheat to the decomposition of the berry consequent on blight, and we could not reason him out of it.

Salt-water for sheep is recommended as a cure for rot, scab, and ticks, and "fastening the wool." "Currying and dressing horses is half as good as their meat." Brimstone and elecampane roots are good physic for them. "Housing [soiling,] cattle winter and summer," is suggested, and clean pens for hogs strongly insisted on. "White bread chewed in my own mouth, I have found the best poultesse in the world for swelling, or ache of any kind."

Farmers' clubs, and agricultural schools, are hinted at in the following: "Gentlemen and Farmers do not meet and communicate secrets in this kind, but keep what they have experimented themselves, or known from others; as *Sybils* leaves: I mean as rare secrets, not to be communicated. I hope that we shall see a more communicative spirit amongst us ere long. And Sir, I cannot but desire you, if you have any things more in your hands of Gabriel Platts, or any mens else, that you would with speed publish them.

"We want a place to the which men may resort for to find such ingenious men, as may be serviceable for their ends and purposes; and also know where to find such seeds and plants as they desire, as the great Clove-grass, Saint Foin, La Lucern, &c.

"Men do usually cover great quantities of land, yet cannot manage a little well. There were amongst the ancient Romans some appointed to see that men did till their lands as they should do; and if they did not, to punish them as enemies to the Publique; perhaps such a law might not be amiss with us: for without question the Publique suffereth much, by private mens negligences. *A little Farm well tilled is to be preferred:* for then we should not see so much waste land, but more industry, greater crops, and more people imployed, then are at this present, to the great profit of the Commonwealth. I know a Gentleman, who yearly letting more and more of that land he used to keep in his hands, yet confesseth his Barns are fuller, because he more diligently manageth what remaineth."

"Master Gab. Platts has given a book of Husbandry entitled, *A discovery of infinite treasure hidden since the world's beginning*. The genius of this age is very much bent to advance husbandry, and gentlemen study *professedly* these improvements." We trust our own age will not be behindhand in the same zeal that characterized the seventeenth century. Our author gives us a sly puff of his own work in a complimentary letter from Dr. Arnold Beatis, as follows: "for which having perused instantly, *à capite ad calcem*, I give you most hearty thanks, as I find it a most excellent piece, both for the improvement of husbandry, and of the other commodities of the country;" with which most hearty commendation. we must conclude our brief notice of Samuel Hartlib.

R. L. A.

For the American Agriculturist.

CULTURE OF CORN.

Rahway, N. J., Nov. 1, 1843.

This crop is one of the most important, that the farmer raises; it enters largely into the subsistence of his family, and any improvement in its culture whereby he can add to the quantity raised without additional expense, is adding so much to his wealth, and that of the country. There is a right way to do everything, and the right way is always the best and most profitable; at the same time, the same routine will not answer in all cases, but must be modified by circumstances, and it is for the intelligent, practical man to judge of these. It is impossible for farmers to travel much, and by personal observation gain that information they need. This, undoubtedly, would be best; however, it is out of the question with the great majority of the farmers—they can neither spare the time nor money for such a purpose. But they can well afford to pay a dollar or two for an agricultural journal, and on a long winter's evening, enjoy themselves by a good fire, in procuring that information which may answer instead of travelling, and be of much value, in the course of their labors.

This part of New Jersey is naturally a good soil, inclined to clay, and is the right kind for hay and grass. It has the advantage of being near the New York market, both by railroad and water carriage, and several spirited farmers are now improving its agriculture, which has heretofore been much neglected. The article most depended upon for sale is hay. Wheat is now raised in sufficient quantities to supply the farmers with their own flour. Thirty years since nothing but rye would grow, and an acre of wheat was as much as any farmer would venture to sow. But to return from my digression. My method of raising corn is as follows:—

In the spring, to plough up the sod ground with one of Ruggles, Nourse, & Mason's plows, to the depth of eight inches. My team consists of a pair of mules, and a yoke of oxen, and I take great pains to have the work done well. After the ground is ploughed, I take a heavy, *sharp* harrow, and go over it lengthwise with the furrow twice; then diagonally; then cross the furrow at right-angles, lapping the harrow one third of the width at least. By this time the ground is well pulverized, and is fit to receive the seed. This year I furrowed it four feet apart, putting a good shovel-full of compost manure into a hill. The after-culture consists in going through it four times with the cultivator; twice between each row at a time, I consider of most importance. I differ from many of my neighbors in my cultivation, that is, I am careful not to turn up my sod to the surface the first year. The sod by rotting under the soil, enriches the land at the cheapest possible rate, and the succeeding crops feel the benefit of this mode of culture. I plant none but yellow corn, with long ears of 8 to 10 rows, and small cobs. The fodder is good, and it never has failed to ripen, although my seed was not put into the ground until the 28th of May this year.

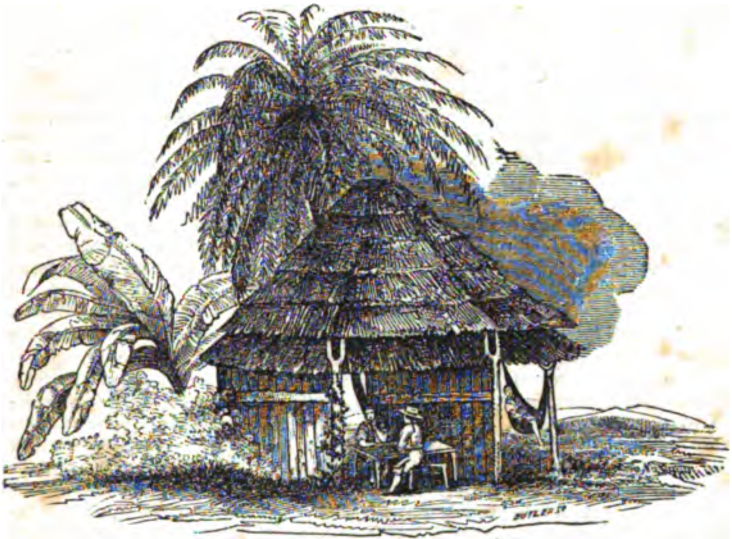
Compost manure for my corn, I make of swamp-earth, barn-yard manure, ashes, coal-dirt, and such other materials, as I can scrape together, through the summer and fall, laying it up in heaps and pitching the whole over once or twice after being pretty well decomposed.

The Cultivator I use, is in shape like the common kind. The teeth are somewhat different; they are made out of inch-square iron, faced with steel, nine inches long below the wood. The two hindmost ones are flat, to prevent the dirt covering the young corn, or roots when it is run through the rows. After the harrowing my ground receives at the commencement, I find this instrument quite sufficient to keep the ground in first rate order.

Under this mode of management, my crops have averaged about 70 bushels of shelled corn per acre. I am still undecided as to the best distance to plant corn; or whether hills are better than drills.

C. Baker.

A MEXICAN COTTAGE.—(Fig. 62.)



As your periodical is taking a wider range than is usual with agricultural publications, I herewith send you the cut of a Mexican Cottage; the style is common in the Tierra Caliente, and is adopted alike by the lower classes and Indians. It is taken from a work just published by Mr. Winchester, called Mexico As It Was And As It Is, by Brantz Mayer, Esq., abounding, among other things, with some notices of Mexican agriculture, products, and stock. I may speak of these more particularly hereafter. W. E. L.

For the American Agriculturist.

COTTON CROP OF 1843.

Log Hall, Miss., November 19, 1843.

I have long since made up my opinion that the cotton crop will not exceed 1,800,000 bales; and I am strengthened in this, from recent information, by letters, estimates I have seen, and conversations with planters, merchants who have travelled, and from facts in my own neighborhood. A writer in the Charleston (S. C.) Courier, of Oct. 28th, gives the dates of the killing frosts for the five past years, and shows when it occurred before November, that the crops fell short of the above estimate. The killing frost of this year was four days earlier than for the five preceding years, which, with the crop being nearly one month more backward than last year, must make its injury very far greater. The frost on the 18th of October, destroyed all bowls where the cotton was not matured, north of 33° in Georgia and South Carolina, thereby rendering the crop short 200,000 bales, as given me in a private letter, from a large planter and a very intelligent gentleman, under the date of Nov. 8th. There is another count in the matter, the crop has opened later than usual, more bad weather than I ever saw, thereby throwing the picking season far behind our usual time. I can point out good and attentive planters, that have not one half gathered now that they had last year; others, that the crop is much lighter; and in all this region no man has gathered near his former average work.

M. W. Philips.

AGRICULTURAL IMPLEMENTS FOR THE SOUTH.

We trust that the writer of the following letter will excuse the use we make of it, as it is a sample of many we are continually receiving, and our object in publishing it, is for the good of the south. We know that the south is in want of improved agricultural implements, suitable for their peculiar crops, and system of cultivation, and that a finer field does not exist for the genius of some of our northern mechanics to display itself than that region, and we are confident that if a few of them would go out there, and study the necessities of the planters, that they could not but do well in manufacturing agricultural implements for them. The plows of which Mr. Potts speaks, would not suit, we think, exactly, and we shall forward some drawings of our own to him in a few days, for criticism. We are of opinion that a satisfactory implement may be made for $10, not to exceed 55 or 60 lbs. in weight, and which will completely clean the space between the rows of cotton and sugar, in passing through them up on one side and down the other a single time each way.

Parish of Iberville, Nov. 22d, 1843.

In No. IX. of your paper, page 257, you enumerate, among the agricultural implements exhibited at the 16th annual show of the American Institute, "Three-share plows turning three light furrows at a time:" also in the report of the committee on plows, page 282, 2d column, "The committee recommend the awarding of a diploma to Thomas Wiard of Avon, for his gang of plows." I presume the last-mentioned must be somewhat similar in its object and effects to that first-mentioned.

An implement that will turn two or three light furrows at a time, say 1½ or 2 inches deep, and turn the grass over and under, is a long-sought desideratum in the culture of all our crops, cane, cotton, and corn. It happens more or less every year, that a continuation of rains covers the whole face of the earth with grass, which must be killed in as short a time as possible, within a week after the ground is fit to work, or the grass will get so far ahead as to materially affect the crop. We have tried cultivators—have had them of all possible patterns, &c., and they, from the nature of our soil, have proved unavailing. We have to depend on the plow, and where it has to run five or six times in the row, you may suppose it is a slow business. A *plow*, such as I suppose either of the above to be; or more properly speaking, a series of plows, which can be so arranged as to travel over the whole surface of the ground, going up once and down once, and destroying the grass at the same time, is the thing we want. If such an implement had been in use this last season, it would have made a great difference in the crop. In one instance—that of a neighbor—there would have been a difference of 100 hogsheads of sugar, in a crop of 250 expected. Would it be asking too much to send me drawings of the implement, or have drawings made for the Agriculturist?

Jno. C. Potts.

For the American Agriculturist.

FERTILITY OF SEA-MUD.

There are immense deposites of sea-mud in salt water bays, creeks, estuaries, beaches, &c., which I believe have been little referred to as of any value to the agriculturist. There is every reason to suppose, *à priori*, that this mud is one of the best manures, as well as the most durable of all that are at present known. I hope none of your readers will be startled at this bold assertion, until they have read the reasons I shall present, to prove that my assertion is not wholly unfounded.

Sea-mud, as deposited from oceanic water, must contain sea-salt, shell-lime, fish-slime, and earthy matter washed from the surrounding shores and rocks, as well as many other ingredients; all of which are found to be valuable fertilizers. We shall see presently its value where fairly tested. Providence never works in vain, and it only requires man to understand the designs, and apply them judiciously, to produce highly beneficial results.

I would recommend such deposites to be collected by our farmers whose land lies convenient for the purpose, to put it into heaps and mix with it air-slacked lime and fine charcoal. By this mixture the salt will be partially decomposed, and a portion of the soda of the salt will be liberated. Any fish-slime, or other animal deposite, will be decomposed, and its ammonia liberated, which will be taken up by the charcoal, and firmly held, until the vegetation shall absorb and appropriate it. The lime will also decompose any vegetable matter deposited in the mud, and reduce it to a fertilizing mold. I recommend air-slacked lime, not that it is better than the unslacked, but merely because it can be obtained at half the cost of the other.

I have intended for some time past to throw out a suggestion relative to a further beneficial effect of lime, soda, or potash in soils, independent of their immediate use as decomposers, or as food of plants. When a soil is sufficiently rich in these alkalies and alkaline earth, they will attract nitrogen from the atmosphere and form nitrates, they will also attract carbonic gas and form carbonates. Here, then, we have nearly the whole elementary portion of all vegetation; carbon and oxygen from the carbonic gas, and nitrogen from the nitrates.

The most striking instance of the great fertilizing power of beach-mud I can give you, is the Romney marshes, in the county of Kent, England. Those marshes constitute a tract of about fifty thousand acres, made gradually by oceanic deposition. Many years since, a sea-wall was built to keep the ocean from overflowing, and the ground brought into cultivation. The wall was first made nearly perpendicular, but the sea washed it so much that they altered it, and gave it a slope inward; it still washed, they then got brush-wood in faggots, and drove spiles through the brush; the sea filled the brush-wood with shingle, and a permanent defence was made against further encroachment. The wall was made from Dymchurch to the grand redoubt, a distance of nearly three miles, and is about thirty feet high. The wall was built of clay in the first place. All the ditches ended at one place, where flood-gates were erected, to open at low tide when the ditches were too full, that the surplus water might run out, and when the tide flowed in, it kept the gates close by the outward pressure. The water in the ditches is fresh, and is never permitted to approach nearer than about four feet of the surface. This marsh has for a long time been the most productive land in Great Britain, or probably in the world. Immense crops of wheat have been taken from portions of it for seven years in succession, without any diminution of the product, the straw rising to the height of seven or eight feet. Highly productive crops of mustard-seed is raised on it. As meadow-land for mowing, or for feeding of stock, it may be considered unequalled. It is truly gratifying to an agriculturist to stand on Lympne castle, built on a hill near the marsh, and view the whole range full of stock feeding; particularly the immense flocks of sheep, which look in the distance like so many stones dotting the marsh. The annual rent of this land, some years since, was twenty dollars (£4 10s.) per acre, and farmers in the neighborhood were always eager to give that rental for portions of it near their homestead. The soil of this marsh, among other oceanic depositions, contains a large quantity of marine shell.

William Partridge.

For the American Agriculturist.

MUCK AS MANURE.

New York, December 1, 1843.

During the past year, I have used muck as a manure upon my farm with the most satisfactory results. It has not only entirely changed the nature of the soil, but also abundantly repaid me for all the expense and trouble I have been put to. The soil upon which it was used is a light, sandy loam, and was almost entirely exhausted of the elements of fertility; so much so, that most of the crops put upon it last year, either failed entirely, or were scarcely worth gathering.

Having drained one of the deposites by clearing out and deepening a ditch, a man with a pair of horses and a scraper scraped out of it and deposited in four heaps about four hundred loads, which I had made into a compost, by using all the stable manure I had on hand in one of the heaps, and also lime, fresh from the kiln, in the others. The man would draw out a quantity of the muck and deposite it about a foot thick, and then cover it with a sprinkling of the lime, then another layer of the muck, and so proceed until he had made the heaps about three or four feet high. This was done in the fall, and was left until the ground was covered with snow, when it was drawn out upon the land on a sleigh, and deposited in heaps over the ground, which we intended cultivating the next year.

When the frost left the muck in the spring, it appeared to have been entirely changed in its qualities. It had lost all its adhesive properties, and was converted into a black, friable powder; it was then spread over the surface, and plowed under. In consequence of its black color, it absorbed the rays of the sun and warmed the soil, so that we had the earliest potatoes in market, and obtained the highest price for them.

I can not tell the exact quantity of compost that was employed, nor the amount of produce per acre; but where I had almost nothing last year, I have now a good lot of sugar beet, mangel-wurzel, and about 500 bushels of potatoes, where it was prophesied I would not have 150 bushels. On the spot where my early potatoes grew, I have one of the finest crops of common turneps I have ever seen; and my orchard, which did not produce a single apple two years ago, that not being the "bearing year," produced me quite a quantity this season. The appearance of the trees is also greatly improved, showing a much more healthy and luxuriant foliage than formerly.

The most gratifying results were manifested upon a spot where I had corn sown broad-cast last year, and which, although it had the whole season to grow in, only reached the height of from one to three feet. This season, after having taken off a crop of rye, cut green, and fed to the cattle before they were turned out to pasture, the whole surface was well covered with the muck, plowed under, and sowed again with corn. It was a pleasing sight to see this crop growing with its broad, green leaves to the usual height of corn, and almost every stalk showing an ear, many of which arrived to a perfect growth. This has been cut up, and we consider it the most valuable fodder we have for our stock. The expense of getting out this manure was almost nothing compared with the price of other manure. As I before observed, it occupied a man and team nine days to get out the muck. I believe we used 160 bushels of lime; it cost four cents a bushel, besides the time employed in drawing it upon the land during the winter.

I have seen a very poor sandy piece of land where muck was used several years since, and it shows to this day; and I am certain that which I have used has scarcely begun to produce its most valuable effects as yet; for this substance is almost entirely made up of the elements of plants, but in such a condition, that it requires time for those chemical changes to take place, which fit them for being taken up by the roots, and assimilated. I find the muck has greatly changed the appearance of the land on which it was spread. Previously, it had a yellow, poor look; now the soil has grown dark in its color, and appears as much richer, as it really is, since the application of the muck.

Henry A. Field.

We were highly gratified upon receiving the letter below, and trust that others will follow Mr. Stuart's example, till we get a sufficient number of communications to make up our chapter on ancient fruit-trees. Accompanying his letter, the writer sent us a specimen of the fruit which grew this season on the venerable old tree he describes. It is of the red pearmane sort, and a fair specimen of its kind. As antiquarian as we are in our disposition, we look upon this apple with great satisfaction, and shall keep it as long as it can be preserved, to show to such of our friends as take the same interest in these matters as we do.

For the American Agriculturist.

ANCIENT APPLE-TREE.

Hartford, Conn., November 28, 1843.

At the suggestion of a friend, a reader of your paper, I am induced to notice a very ancient apple tree which stands on Charter-Oak Place, in this city. This Place was the old seat of the Wyllys family, one of much distinction in the history of this state, and remained in their possession till about twenty years ago, when it passed by purchase into the hands of Mr. Stephen Bulkley, lately deceased. According to the uniform statement of this family, and that of Mr. Bulkley, to whom it was communicated by the last proprietor of the Wyllys name, from whom he purchased it, the apple-tree in question was brought from England by Mr. George Wyllys, the original settler, some time before his death, which took place in 1645. The tree, therefore, is probably more than two hundred years old. Nearly two thirds of its trunk are now gone. The remainder consists of a side or shell, not more than four inches thick in any part. The inside of the tree, therefore, has almost entirely disappeared, but the portion left and the bark on it, are still vigorous. So far as can be judged, from its present appearance, the trunk was about twenty inches in diameter. From the top several young and thrifty branches shoot out, giving a present height to the tree of about twenty-five feet. It is of the variety called pearmane. It generally bears more or less, and this year bore about half a bushel. The fruit is very choice. It is often inquired for by visiters to the Charter Oak, who in some way or other have acquired a knowledge of its high antiquity. Besides this there are several other fruit-trees on the place, to which tradition assigns a great age; particularly some pear-trees standing in the avenue leading to the house, and one on the brow of a hill a little northeast of the mansion. I am unable, however, to fix their time of planting with any accuracy.

A chapter on fruit-trees, as you remark in your paper for September, with the circumstances connected with them, would certainly prove curious and interesting. I hope you will be able to furnish the public with such a chapter. Should the facts I have communicated aid you in such a purpose, my object will be answered.

J. W. STUART.

For the American Agriculturist.

IS WHEAT THE ORIGINAL OF CHESS?

Virginia, November 24, 1843.

I return my acknowledgments to R. L. Allen, for the courteous bearing he has shown in his article on chess in your 10th number. He exhibits the spirit of an inquirer after truth; and though I had no idea of provoking, or engaging in a discussion, it is a gratification to meet such an opponent in a fair field. I regret, however, that he should have perceived anything in my communication that indicated the spirit of a controversialist; and still more, that he should have regarded me as transgressing against the canons of good taste. Though my remarks were only intended as a little good-natured raillery, I will endeavor to render myself no farther obnoxious to his criticisms.

It was without due reflection that I mistook R. L. Allen for "Ulmus." The paper had scarcely passed from my hands when I perceived the error; but I freely and cordially transfer to him the encomiums I passed upon Ulmus. May the individuals of the genus continue to be multiplied.

While Mr. A. offers to read every argument going to prove the inconvertibility of wheat into chess, if presented to him in a condensed form; and while, too, he appeals to nature in behalf of his views; he not only takes no notice of the arguments, founded on the laws of nature, which I had advanced, but regards them as irrelevant. It seems to my comprehension that he has thus restricted me within very narrow limits. I have no argument to offer other than that which is founded on nature's operations. We daily perceive that all organized beings are governed by immutable laws, one of which is, that like shall produce its like,—every seed and every animal after its kind. If a law of nature were found to fail in a single instance, everything would become unsettled, and liable thenceforth to be thrown into confusion. There could be no longer any truth in science, nor any uniformity of natural results. If wheat, for instance, which belongs to a tribe of plants producing a spike, or head, may by any process be converted into chess, which belongs to a very different tribe, bearing a panicle, it follows of course, that every other vegetable and every animal, may, under certain conditions, be converted into something equally different and distinct from its parent. If the juices which are elaborated by the leaves of wheat can go to the formation of chess, the pabulum of the apple may with the same certainty be directed to the development of the peach.

But in no instances have these changes ever been observed, or even asserted to take place, except in the solitary case of chess. Does not Mr. A. then perceive, that in contending for this change, he offers extreme violence to nature? And how can he, as a man of observation and science, rely upon the testimony of any man—even upon his own, I was going to say—and not distrust it, when it goes directly to nullify a law of nature? Should he not rather conclude that his witnesses, however credible, were yet mistaken,—and that, instead of making patient and laborious investigation, they had been satisfied to draw inferences and jump to conclusions?

With these general remarks, which I trust Mr. Allen will not consider foreign to the subject in dispute, I will proceed, according to his invitation, to examine the facts he has submitted—premising, however, that similar cases have been frequently reported heretofore. Mr. Allen's facts are briefly these: (See second November No., page 300, second column, first paragraph on to the end of the article.)

In the careful statement which Mr. A. has given of the first three facts, there is still a most important omission, which deprives them of all claim to serious consideration. Before the result was stated, it should have been shown that there was no chess in the seed that was cast on the ground—for Mr. A. fully admits that chess will grow from its own seed. Every farmer knows that chess is a more hardy plant than wheat—that it will grow upon uncultivated land, and even by the way-side. Indeed, the above facts prove that it will flourish where wheat will not grow at all. But where the soil is fertile and properly prepared, the wheat-plant is so much more luxuriant, that it outgrows the chess, and prevents it from developing itself to any great extent. There appears then, to be no necessity at all, in these instances, to infer that the wheat had turned to chess, nor indeed anything to render the inference even probable; for the facts amount, at best, to nothing more than inferences from premises in which all the necessary conditions to a certain result are not alleged to exist. There is probably not one farmer in a hundred, who thoroughly purges his seed-wheat from all extraneous matter.

The 3d fact, which is adduced to prove that *oats* also change to chess, may be regarded as being, what I believe the lawyers term, *a swift witness*. It is a well-established principle, that one who proves too much, proves nothing at all. It is enough to show that wheat turns to chess; but to make two distinct and very dissimilar plants assume the same ultimate shape, is calculated to throw additional doubt on the whole theory. Does not the introduction of this third fact clearly prove, if it proves anything, that there was chess sown with the seed in every case?

But Mr. A. cites cases to show that wheat and chess have both originated from the same seed; and even that the *same stem* has produced one branch of wheat and another of chess. He was assured of these facts by Mr. Wright, who received them from a third person. In the one case, the numerous fibrous roots might very readily have become so matted and interwoven, as to render it impossible to separate them; and therefore this fact can not be regarded as by any means conclusive. The other case, if it ever existed in reality, would be much more to the point. But as it amounts only to *hearsay* evidence, as it does not appear that the specimen was submitted to the inspection of others—and as it invests the same subject with a double character, I trust Mr. A. will not deem me unreasonably skeptical, if I withhold my belief in its existence, and class it with other marvellous accounts which have been published. If I am totally incredulous, it is not from any want of confidence in the veracity of Mr. A., or his informant, neither of whom saw the plant.

Such, then, is the testimony on which Mr. Allen relies, to establish the convertibility of one plant to another. It is all, with a single exception, indirect and circumstantial. In the administration of human laws, it could not be entitled to much weight—nor indeed to any, unless the witness testified of his own knowledge: how little, then, can be claimed for it, when it is cited to abrogate a law of nature.

It is a difficult matter to prove a negative, yet I think evidence may be adduced of a stronger character *against* the doctrine of change, than Mr. A. has quoted to sustain it. I will describe one experiment, a detail of which may be found at length in the Farmers' Register, vol. 1, p. 83. It is so well condensed by David Thomas, in the Genesee Farmer, that I will adopt his language. "Thomas Cocke, and Edmund Ruffin, of opposite opinions on the origin of chess, in company with Wm. J. Cocke, who was undecided, selected a clean piece of hard, wet ground, [which had been in corn, but not plowed later than June,] and marked it out in right lines, planting a few small and shrivelled grains of wheat, such as is supposed to turn into chess, at measured distances. A small spot adjoining was strewed broadcast, with similar defective seed. In the spring it was found that only a part of these seeds had germinated, so very imperfect was their quality; and as a farther test, some of the plants were cut down within an inch of the ground. The parties say, 'It was our design in this experiment, to bring into operation every cause to which this change is usually ascribed by different persons, namely: 1. Imperfect seed; 2. Thick sowing; 3. A wet soil; 4. A hard and unbroken soil; 5. Grazing or mowing.' No transmutation, however, was effected by any or all of these five causes. At harvest it was all wheat, and not a stalk of chess in the whole patch."

I will also briefly state something of my own experience. A number of years ago, my farm was so infested by chess, that it became a serious pest. At length I determined to try the efficacy of clean seed—seed that I *knew* to be clean. I assisted in preparing it with my own hands, and desisted not as long as a grain of chess could be discovered. After pursuing this course for a few years, I had the gratification to perceive that the chess was so completely extirpated, that out of a crop of several hundred bushels of wheat, it would have been difficult to gather a handful of chess. Had Mr. Allen's friends, from whom he derived most of his facts, pursue a similar course, I doubt not they would have experienced similar results. Will Mr. A. regard these cases as exceptions to a general rule? I trust they may rather lead him to review the position he has occupied—for he manifests none of the spirit of a partisan—and that he may be induced to take a comprehensive view of the subject, more becoming his enlightened mind, and his zeal for the cause of truth. Let me beseech him to divest himself of all hasty conclusions and undue bias, and satisfy himself by well-conducted experiments under his own guidance. It may be a work of some labor, but it will either confirm him in his belief or convince him of his error. I shall be willing to abide by the result.

P.

For the American Agriculturist

NOVEL METHOD OF WORKING BUTTER.

Montpelier, Vt., Nov. 22d, 1843.

A VERY useful and ingenious mode of extracting whey from butter, was recently related to me by a gentleman who had resided many years in the grazing districts of France; and he informed me that a similar apparatus is at present in successful operation, near by here, in this state, although I have not yet seen it. He described it in a manner that could not fail to be understood to any farmer in the Union.

The machine, he represented, as made of wood, in form not much unlike a grindstone, closely fitted into a trough, leaving a space between the stone and bottom of the trough not exceeding a sixteenth of an inch in thickness. The trough is first filled with clean water saturated with salt, one end of which is crowded full of the newly-churned butter. Then the stone is put in motion by means of the crank or otherwise, and the butter is drawn beneath it, and comes out at the other end of the trough in thin sheets, not more than one sixteenth of an inch in thickness, almost entirely freed from the whey, and for common use requires no further salting. The brine thus prepared, has another very important office to perform. It imbibes, by chemical affinity, all the whey with which it comes in contact, and leaves the butter by itself.

Although this apparatus is extremely rude and simple, it is obvious to an ingenious mechanic, how easily such a machine could be improved upon, and answer a tenfold purpose. J.

For the American Agriculturist.

FENCES ON THE PRAIRIES.

Peoria, November 6th, 1843.

I HAVE now been a resident of this country five years, and in addition to my own experience in farming here, I am backed by the opinions of seven eighths of those who have emigrated to the prairies from England, that fencing upon them is just so much money thrown away. Grazing of cattle, and indeed of all other beasts, may be done throughout the west precisely as sheep are managed on the Downs in the south of England. I need not dwell upon this subject, as you are familiar with it. A few properly-trained cattle-dogs, and an agreement on this subject among the settlers, is all we want. I hope you will call attention to this matter in a complete essay, for I recollect only a paragraph or two that has appeared in your paper yet, and that, if I mistake not, was in your April No., under head of Tour in England. Fencing here, as you well observe, is an "intolerable burden," and what is more, I will add, a perfectly useless one.

CHARLES WENDALL.

For the American Agriculturist.

ICE-HOUSES.

Petersburg, Va., December 5th, 1843.

A GREAT deal has been written on the proper construction of ice-houses, and yet there are very few which preserve ice in the best manner. The chief defect, as far as my observation extends, is *imperfect drainage.* Nothing can compensate for this; all the lining of roof and walls with tan-bark, charcoal, &c., will be attended with little benefit. As the season for cleaning out ice-houses, preparatory to putting away the ice, is at hand, I take the liberty of making a few suggestions on the subject.

The best site for an ice-house is at the summit of a steep declivity, with a northern aspect. If there be trees about it, so much the better. When the pit is excavated, it will not be a difficult matter to cut a drain on a level with the floor, either by ditch or tunnel. When the ground is level, the only drainage that can be effected is by absorption. If the earth be of a loose and porous texture, the absorption may keep pace with the supply of water from the melting ice, but if it be compact and retentive, I know of no remedy, not even by sinking a well of moderate depth. The ice-water and rain-water will destroy the ice long before the hot season is past.

The best ice-house I have ever seen, is one made in as cheap and rude a manner as the plainest farmer could desire. On the side of a hill a pit was dug; a simple pen of logs supported the walls; it was covered with rived pine slabs, and so open as to admit a free circulation of air. During the heat of the day, the sun shines full upon the roof. And withal, the pit is only 12 feet square, by 14 feet deep. It has been in use now for 6 or 7 years, and has never been clear of ice since it was first filled. Two years ago, when the winter was so mild, it was only half filled, with thin ice; and yet there was some remaining at the end of the next season. In the construction of this house, there is nothing to distinguish it, except the perfect draining.

Our ice-houses in Virginia generally become empty by the last of August or first of September; in many cases still earlier. There is no time when it is more desirable to have a full supply than in September; for the weather is then sometimes exceedingly hot, and more sickness prevails than during any other month. Since ice has become an article of necessity almost as much as a luxury, I trust these remarks may not be unproductive of some benefit.

T. S. PLEASANTS.

For the American Agriculturist.

POUDRETTE AS A MANURE.

New York, Dec. 2d, 1843.

☞ D. K. MINOR presents his compliments to those gentlemen who have used poudrette, manufactured by the New York Poudrette Company, in 1841, '42, and '43, and requests *each* to furnish a detailed statement as to the *kind* of *crop*—the *character* of the *soil*—the *manner* of *using it*—and the *results* of its application—especially when used *comparatively* with *other* manures. The object of this call is to collect *facts* in relation to the use and value of poudrette as a manure, which will be published in a pamphlet, and *one* or *more* copies sent to those who communicate the results of their experience, that *all* may be able to judge of the best mode of using it, and the *crops* and *soil* to which it is best adapted; and it is hoped therefore, that those who have used it will give *full* reports, at an early period, that others may profit by their experience. Communications may be addressed to D. K. Minor, New York.

GOOD AND BAD POINTS OF CATTLE, AND THE FORMATION OF FAT AND MUSCLE.

As this subject is likely to be brought up for discussion at the annual meeting of the State Agricultural Society in January, we beg the attention of all those who take an interest in cattle, to the following article from the London Veterinarian, by Mr. Robert Read, V. S.; and especially that part in which he treats of handling, and combats the opinion recently expressed by Dr. Playfair, that animals which fat the easiest, have the smallest lungs. Dr. P., as we are informed, knows nothing *practically* of breeding, or the anatomy of animals. He took his opinions from the butchers in London, who formed theirs entirely from an examination of *fat* cattle, which must, of necessity, present the lungs in an unnatural state. Cline, like Read, an able veterinary surgeon and writer on the best forms of animals, and who examined hundreds, in different conditions, expressly says that an animal to fat easily, must possess large lungs. All that we ever examined, we found thus constituted, and we shall adhere to the opinion of these authorities rather than Dr. Playfair's, till we find something more convincing than he has yet adduced to the contrary. Mr. Read fully explains that horses with large lungs fat easily; but it was a great error on the part of Dr. Playfair, to compare the lungs of a *horse* with those of an *ox*. Animals of the *same* species should be compared with each other, and not with those of a *different* species, as they are constructed for different purposes. We do not breed the horse for his meat. We have no doubt that horses with the largest and best-formed lungs, other things being equal, will be found better feeders than those with small lungs. We again recommend what follows to attention; it should be *studied* rather than *read*.

The skin or external envelope in the *ruminantia herbivora* is an important feature in developing the disposition of cattle to fatten, and is of much import to the farmer and grazier.

A good skin is known by the familiar name of *touch*—that is, the animal should possess a mellow skin, with resiliency moderately thick, yet loose and yielding to the fingers when gently elevated, and resuming its station with an elastic spring, as if there was underneath a tissue of wool impregnated with oil. The resilience of good skin in an animal depends on the organization beneath it, and the presence or absence of cellular or adipose tissue. The existence of this membrane constitutes the good handler—its deficiency the reverse.

The pilary or hairy covering should be thick, not coarse; glossy and soft, with an inclination to yellow, and in proportion as this exists as a quality or constituent, so is the propensity to make fat: on the other hand, a thinness of hair, and coarseness in fibre denotes an unthrifty animal, more especially if conjoined with a dense firm hide or skin, and with short hair. This implies a bad handler, and is a sure indication of being a slow feeder, with a tardy disposition to increase in volume, either of fat or muscle. It is by the feel of the cutaneous tissue that a judgment is formed as to the state of maturity now, and that an opinion be formed of the condition and worth hereafter. The beautiful mossy skin that seems like soft velvet; its peculiar feeling, as if it were stretched over a bed of down when the fingers are applied; and its easy resilience when traction is made use of; these are the best and surest prognostics as to the future worth of the animal.

Physiologically speaking, a mellow skin arises from a free circulation of the vascular system through the meshwork of the cellular or adipose tissue, or those cells that are destined for the reception of fat. These tissues are considered by some alike synonymous anatomically. They are always in a moist state, from the internal cavity of the cell performing the office of exhalation. Want or supply of interstitial deposite makes a bad or good skin.

The adipose and reticular tissues are extremely vascular, more especially that portion in immediate connexion lying under it. A good and kindly handler has a full development of this material well spread over the superficies of the external frame under the skin. The membraneous tissue is a bed for the origin of the absorbents, and the adipose tissue is the depository in which the fat is deposited by the exhalents peculiar to it. These membranes participate in the character of the hide. They are more dense and inelastic, and less expansive. They do not admit of being so readily dilated by the interstitial deposite, and consequently are longer in acquiring a mature state in the progress of making fat.

A thick and unyielding hide, not succumbing to the internal deposite in the adipose tissue under the skin, is thus continually reacting by pressure on the absorbents, and in this manner makes the animal slow in accumulating fat on the external parts of the frame. The difference in the feel between the glossy and coarse-haired animals is dependant on the secretion from the cutis. In the thick skin it is more inspissated, and exfoliates in branny scales. In the mellow and glossy skin it is more oleaginous, which may also be accounted for. Its having a greater freedom for the assimilation of nitrogen—one of the compounds of ammonia—a chemical agent that is abundantly given off from the skin, and uniting with the unctuous exudation of the cutis, gives to the skin that peculiar saponaceous feel, so necessary as the index of that organ performing its healthy functions, and may be ranked as a sure symbol of early maturity.

The ears should be of a fair proportion, not overlarge, thin in texture, and capable of free and quick motion. A good ear denotes good quality; a coarse ear, thick and large, is generally associated with much coarseness in the animal. A good ear is nearly always found in combination with a prominent and beaming eye, with thin palpebræ or eyelids.

This development of eye is most times in unison with a good and clean horn, tending to a very slight red at the radicals or roots. This indicates also a kindly disposition to early maturity. The happy and beaming eye of the healthy animal shows contentment, a very desirable omen as to the quick growth of the animal; while, on the contrary, a heavy eye, with a want of vivacity, with thick eyelids, and a too visible conjunctiva or white of the eye, is indicative of an unhappy and restless temper, incompatible with a good and profitable feeder. The eye of contentment, of quietude, and of calm expression of countenance, is alone compatible with that temperament so conducive to accumulation of flesh and fat. These qualities, if derived hereditarily, will be maintained throughout the whole evolution of growth: they are also well-known signs of early disposition to maturity. The hereditary principle should always be borne in mind. The old adage of "like will beget like," whether applied to the symmetrical law of external form, of quality, of temper, (either good or bad,) of constitution, of a disposition to make either fat or muscle, or to any other cause inherently acquired. Therefore the only method to ensure those qualities which are so essential to the welfare of the farmer, is to commence primogenitively with the best and most approved principles that have hitherto been found to ensure a healthy and profitable stock.

I shall now speak of bone, as being the framework on which all the materials of the body are built. It should, when examined in the living animal, have the appearance of being fine and small in structure. It then augurs a good quality and being readily disposed to fatten, although it sometimes betrays too great a delicacy of constitution. A bone may be small from a consolidation of its structural parts, yet be capable of sustaining more weight, superincumbently, than bone of a larger size, and whose size depends only on the cellular expansion, and not on a cylindrical consolidation. A large bone maintains a coarse-bred animal, a dull feeder, with a torpid vascular action, that only tardily irrigates the frame with the living stream. Such animals have a greater disposition to lay on more muscular than fatty substance.

Having concluded my observations on the external structure, relative to the propensity animals have of making fat, I shall now offer a few opinions on the arrangement of the internal organs for that purpose.

The lungs should be large, but not occupying the chest too much posteriorly; the chest capacious and deep anteriorly; these being the organs for preparing the arterial blood that nourishes every part.

I have also remarked from inspection after death of hundreds of animals, that the roots of the lungs do not diminish in size so much as that portion which is in contact with the midriff in the fattening animal: lungs over-large are not more productive of fat than those which are of a moderate size. My solution of this fact is, that if the lungs occupy too much of the chest in the posterior part, there is a limitation to the expansion of the rumen or first stomach, and the animal does not enjoy so much lengthened quietude in rumination, a circumstance very essential to the fattening beast. This substantiates what I have before stated. The chest can not be too deep nor yet too broad in its anterior external conformation; therefore, instead of attributing the full, spreading, wide-ribbed chest, posteriorly, as instrumental to the lungs, the space for the expansion of the stomach must not be overlooked, a large digestive apparatus being required for all large herbivorous animals. The heart is an important organ in the animal frame. It is rarely found over-large in the fat animal. It is the forcing-pump by which the whole of the body is irrigated through the arterial tubes. If symmetrical organization pervades throughout the animal, the chances are that the vascular action will harmonize over every part, and the deposite of fat will equalize over the whole of the body. On the contrary, an animal with disproportionate parts will have a greater disposition to lay on muscle or fat on those parts respectively that have the greatest share of vascular action.

I am now proud to state some indisputable facts. I have many times examined animals by mediate auscultation, with capacious chests anteriorly, and the lungs duly inflating them. Previous to their being stall-fed, they have, when slaughtered, lungs small posteriorly. It is also certain that if an animal dies well, the lungs will be found disproportionate to what they must have been in the living animal.

I do not agree with the generally-received opinion, nor with Dr. Lyon Playfair, that the lungs must be of necessity small when the animal first begins to fatten; but, as the fattening process goes on, the internal cavity of the chest becomes smaller, the action of the heart weaker, and the lungs diminish in size in a regular gradation, from various causes; first, from limited expansion; secondly, from absorption, and by pressure of the surrounding parts; and, lastly, from quietude never allowing their due inflation, which the act of depasturation affords.

The liver is also found small. This I consider to be from absorption and internal pressure of the surrounding organs. The liver has also a diminished supply of intestinal and mesenteric blood, from the appetite not being so vigorous, and less food being eaten as the animal grows to maturity.

I have known many animals die from accident, that, on inspection after death, have had large lungs and livers. They were in lean condition, but had every good quality for fattening; and I have no doubt would have made prime fat beasts, and whose lungs and livers probably would have been smaller when slaughtered.

I do think that Dr. Lyon Playfair is wrong in the opinion, that small lungs and livers are the best organs for the assimilation of food and fat. I think that the reason why animals become speedily fat in proportion as they approach maturity, is from the arterial action being slow, and the venous circulation impeded from the pressure of the accumulating fat. The arterial exhalents deposite more than the venous circulation can return, or their absorbents take up. Thus the harmony is broken. It is a fact well-known, that very little blood of the venous kind can be taken from the fat animal. From what I have stated, taken collectively and in conjunction with the primeval external conformation of the animal, may be deducted those determinations which tend to either the formation of fat or muscle.

Before concluding these remarks, I beg to offer an opinion respecting small lungs, as stated by Dr. Lyon Playfair, (at a meeting of the Council of the Royal Agricultural Society,) that they are more favorable to the formation of fat. Dr. P. says, horses have large lungs. I well know, and not speculatively, that horses, if fed on meal and potatoes, or turneps, quickly and rapidly make fat. In fact, this is the compost that horse-dealers use to puff up the farmers' cattle, so as to give them a glossy and plump look previous to sale, and the being put to work in this state oftentimes causes their death. On opening them, I have seen them loaded with fat.

Now this is not in accordance with Dr. Playfair's views. My firm conviction is, that animals with small lungs in their growing state will in proportion suffer in their external form.

FOREIGN AGRICULTURAL NEWS.

By the steampacket Acadia, we have received our European journals up to the 19th November. Among them, we are indebted to Mr. P. L. Simmonds, foreign newspaper agent, in London, for the Belfast Northern Whig, containing the proceedings, at length, of the annual meeting of the Belfast Flax Society; also for two numbers of the Gardener's Chronicle.

Markets.—*Ashes* were in good demand. *Cotton* advanced on the 13th, from ⅛ to ¼d. per lb.; but on the arrival of the steampacket Hibernia, with more favorable news of the crop, receded to the old prices as per our last dates by the Caledonia, and was slow of sale. *Beef* of last year's packing dull—the new was looked for with interest. *Pork* and *Hams* in request. *Lard* and *Lard-Oil* have advanced with brisk sales. *Cheese*, of the better qualities, brisk. *Tallow* in limited demand, though firm in price. *Linseed-Oil*, fallen a trifle. *Oil-Cake* much inquired after. *Naval Stores* dull with a downward tendency. *Flour* limited transactions. *Rice* but little doing. *Tobacco* steady.

Money was rather more in request, and temporary loans had advanced from 2 to 3 per cent. First-rate paper, the money returnable at call, could still be done at the lowest rates.

American Stocks.—The transactions in these very limited.

Cheese.—Messrs. George Wright & Co., in their circular, say, that American Cheese, to suit the English market, must be firm, free from pasture flavor, rich, and above all things, shipped and arrive in good order. This latter point is only to be gained, by a free circulation of air during the voyage. Fine cheese shipped in conformity to the above, is sure to find immediate sale.

Hams.—The same firm say, we hope to be able to place American Hams on the same footing as Westphalia. To effect this, they must be well-cured, sewed in canvass, and shipped loose.

American Provisions in London.—A large sale took place on the 15th November, and went off tolerably well. The great complaint about the Beef was, that the *breed* of animals from which it was made was not as good, nor was it as well fatted as the English.

Mr. Colman.—In answer to the numerous inquiries about Mr. Colman, our last letter from him was dated at London, November 14th. He was still prosecuting his agricultural tour, and writes that his health was good, and every facility afforded him in his inquiries throughout Great Britain. He had gathered a large fund of information, which he was rapidly condensing, and will in due time be given to the public. His address is, at present, to the care of Messrs. Baring, Brothers & Co., London, to whom all letters should be forwarded, prepaid.

Yorkshire Gazette.—*Extraordinary Pig.*—A person of the name of Croft, who resides in Petergate, has now in his possession a gilt pig, one of a litter of fourteen, which has six eyes in the centre of its face, a proboscis of about two inches projecting from the forehead, and a tooth from the mouth, the former resembling an elephant's trunk, and the latter a tusk. The nostrils of another of the same litter, which is still living, are inside the mouth. The former is certainly a most remarkable curiosity.

Preston Chronicle.—*Deterioration of the quality of Cheese, by Bone-dust on Pastures.*—At the meeting of the Preston Agricultural Society, it was stated that the application of bone-dust to the land, had affected the taste of cheese. One of the members present accounted for it thus: In stall-feeding of cattle, which had been much recommended, the milk of cows was equal in quantity, but not in quality, to those allowed to roam at large. How happened this? Cows not only required proper nutriment, but a variety of it, and they required exercise as well. With bone-dust there might have been a luxuriant crop, and the cows enabled to feed abundantly without taking any exercise in search of their food, and, having sooner got a full belly, lay down to rest. One kind of manure produced only one or two, or at most three kinds of grass, but changing the manure produced a variety. If they used not only bone-dust, but guano and gallaxoide, they would have a greater variety of herbs than if they used only bone-dust. This variety of grass induced the cow to walk about to pick up the food that best pleased her, and by so doing took the exercise that nature required.

Liverpool Mercury.—*A Monstrous Cabbage.*—A cabbage of the common kind was last week cut from the garden of Mr. Johpston, at Saunder's Bush, in the parish of Arthuret, of the following enormous dimensions: circumference, 15½ feet; diameter, 5½ feet; and weight, 4½ stones.

We suppose the stones here meant are 14 lbs.; if so, the cabbage weighed 63 lbs.!

Paisley Advertiser.—*Garlic a Preventive against Rats and Mice in Grain-Stacks.*—A farmer in this neighborhood has, for some time past, put garlic in the bottom of his grain stacks, and since he has adopted that plan, has never been troubled with vermin. Before adopting this plan, on taking down a stack of grain, the assistants never killed less than from 15 to 20 rats, and above 100 mice. This is a very simple, cheap, and effective method of preserving grain in stacks.

New Farmer's Journal.—*Utility of Geese and Asses to the Farmer.*—It has been long remarked, that cattle of all kinds are never unhealthy where geese are kept in any quantity; and the reason assigned is simply this, that geese consume with complete impunity certain noxious weeds and grasses which taint more or less, according to their abundance, the finest paddocks depastured by horses, bullocks, and sheep. Most farmers are aware of this, and in many places where the beeves appear sickly change is tried, and the soil which the cacklers tread is converted for the time being into a sort of infirmary. The pasturing of two or three asses with sickly cattle has also been found productive of the best effects, from a similar reason.

Wheat-Stack secured from Vermin.—Lord Western writes: I enclose you a draught of one of my wheat-stacks, with the specification in detail of its dimensions. Ten thousand sheaves are secured in that stack against all sorts of vermin, upon seven stack-stones and a frame. This I beg to observe, is accomplished by superior skill, and not by great labor, and at an expense only of about 13*l.* for the stones and frame. I invite the inspection of my stack-yard both here and at Rivenhall, and I think that the advantages of cultivating and encouraging the art of stack-building will be obvious to everybody who sees them.

Aviary at Windsor.—Among the fowls in this choice and curious collection are five Cochin China pullets, (five hens and two cocks,) imported direct from Asia. Such is the extraordinary size of these birds, that when full grown they will stand upon the ground and feed from off a table 3 feet in height; their usual weight being from 22 lb. to 24 lb. per couple. Their eggs, the shells of which are of a dark mahogany color, possess a peculiarly delightful flavor, and are highly prized. One of the pullets has laid upward of 50 eggs in less than eight weeks. The cock chickens, although not more than a few months old, now measure in height 23 inches from the claws to the beak, notwithstanding they are but little more than half-grown. Of Java milk-white silver bantams, that extremely rare fowl in England, so difficult even to preserve in this country, there are 12 couples. Until now it has never been considered possible, although numerous attempts have been made, to rear this singular and delicate description of bird in our generally cold and variable climate; Mr. Walters, however, who has the whole superintendence of the aviary, has fortunately succeeded in rearing eight birds out of a hatching of ten. They are now three months old, and perfectly healthy. Five Scotch fowls, peculiar to only some portions of the highlands in the north of Scotland, are among the collection. They are fully feathered down the legs to the very nails of their feet, and in general appearance somewhat resemble the ptarmigan, or red grouse. The cock-bird which is beautifully marked, is a perfect picture. Among the other descriptions of rare birds at the aviary are two hens and a cock of Sir John Sebright's pheasantlike breed, several clear-white bantams, eight real black Spanish birds, and other fowls of a similarly choice and valuable character. The spacious pigeon-house, which rises from out of the centre of the aviary, forming a picturesque object when viewed from the home-park, contains a vast number of pigeons of nearly every known breed, among which may be enumerated pouters, bald-heads, tumblers, Spanish runts, nuns, and carriers. The whole of these birds (not excepting the carrier-pigeons) have been trained to become so exceedingly tame, that upon visiting the aviary they will hover around the head, perch upon the arms, and feed out of the hands of their possessor.

Rapid Vegetation.—The *National* states that an extraordinary specimen of rapid vegetation may be seen in one of the hot-houses of the Jardin des Plantes at Paris. An offshoot of bamboo cane has within the last ten months grown ten yards high, which is more than 5 inches each day. It may, in fact, be seen to grow, since its march of ascension is as rapid as the movement of the large hand of a drawing-room clock.

GARDENER'S CHRONICLE.—*Enormous Egg.*—An egg was this week laid by a goose at a farm in Quermore, near Lancaster, whose weight was 10 ounces, its circumference longitudinally was 10¼ inches, and it measured 8¼ inches round.

Large Onions.—An average sample of 15 onions, which weighed upward of 10 pounds, was grown on a small croft in the fertile village of Longton, near Preston, which had been sown with 5 lbs. of seed from the same ground. It is supposed more than as many tons have been gathered.

Propagation.—Perhaps there may be no harm in stating the fact, although it may be known to some of your readers already, that young plants may be propagated by means of birds'-nests. Roses and other kinds of bushes will sometimes put forth roots into the old moist nests of the wren and hedge-sparrow.

Enormous Mushroom.—A mushroom of the species Cow Boletus (Boletus Bovinus) has this week been got on the farm of Mr. Thomas Beesley, Higher Bartle Wood, Plumpton, which measured 43 inches in circumference, and weighed the extraordinary weight of 5 lbs.

Prolific Hive of Bees.—Mr. Anthony Balderston, of Barnfield, Mervith, has a hive of bees that swarmed twice in May; the plumb swarm of which swarmed twice in July. From one swarm (including the old one) he has at the present time five flourishing hives.

Editor's Table.

COPYING ARTICLES WITHOUT CREDIT.

THE Boston Cultivator, of 25th November, copies two articles from us without credit. The Tennessee Agriculturist copies an article in its November number, and during the past year several others; one of considerable length, which it says was written "by our friend R. L. Allen." This is not proper, it should credit it to the American Agriculturist. The American Farmer took a "Receipt for Curing Hams" some time since from us, which was afterward copied half over the Union, giving it (the American Farmer) credit; and in its number of the 29th November, it copies a column and a half of our Foreign Agricultural News without credit. Now these are small samples, which happen to be at hand this moment, and that weekly and monthly occur among our contemporaries; they also *condense* articles repeatedly from us, without giving credit to the source whence they draw them. We never do this intentionally, as will be seen by reference to our department of Foreign Agricultural News, also to the article Agricultural Shows, which appeared in our last number. It is our intention to be scrupulously exact in giving credit for everything, according to the strictest usage. We know the editors of the above papers intend to credit, but we certainly suffer, through *some one's* carelessness, and we think it can not be objected to, if we hereafter point out these omissions, and claim the credit which is justly due us.

We have been plundered of our Foreign News department without mercy, and on this point we feel a little sore; for we pay a large subscription annually for foreign journals, as they will rarely exchange; and to make up this department, it usually costs us ten times the labor that it does to write an equal amount of editorial matter. If any one has any doubts on this subject, let him, upon the arrival of a steamship, be in the receipt of 1000 to 1500 pages or so, of foreign journals, and set down to extract and express all the substance of these which he may think interesting or instructive to his readers, and he will then find out that it is pretty hard work; especially, if after being actively engaged in some business all day, he is obliged to rob himself of his regular hours of sleep in order to accomplish his task by a given time. This we do every month; and in consequence of several of our contemporaries continuing to copy these items, after repeated warning of the injustice they were doing us, we struck them from our exchange list. Since the above was written, we have received the Boston Cultivator of 2d inst., and Traveller of same date, both of which copy the "Receipt for Curing Hams," and give us credit. Very well, gentlemen, that will do. Will the Traveller now correct the misstatement it made of our opinions upon Ayrshires? We have sent it a marked notice *three* times, and yet it has paid no attention to it to our knowledge.

THE VEGETABLE KINGDOM; or Hand-Book of Plants and Fruits, by L. D, Chapin; with 140 Illustrations, a copious Glossary, &c., comprising part I. and II.; New York, James Lott, 156 Fulton street. This is a very pretty volume, comprising in both parts upward of 400 pages, handsomely illustrated. Mr. Chapin has devoted several years to fit himself for writing this work, and we have no doubt he has produced an excellent book, and one worthy the attention of the student of the vegetable creation. Price $1,00, which we consider extremely cheap. For sale by Saxton & Miles.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, DECEMBER 15, 1843.

ASHES, Pots,	per 100 lbs.	$4 50	to	$4 56
Pearls,	do.	5 00	“	5 06
BACON SIDES, Smoked,	per lb.	3½	“	4½
In pickle	do.	3	“	4
BALE ROPE	do.	6	“	9
BARK, Quercitron	per ton	23 00	“	24 00
BARLEY	per bush.	52	“	56
BEANS, White	do.	1 25	“	1 75
BEEF, Mess	per bbl.	6 00	“	7 00
Prime	do.	4 00	“	5 00
Smoked	per lb.	6	“	7
Rounds, in pickle	do.	4	“	5
BEESWAX, Am. Yellow	do.	28	“	30
BOLT ROPE	do.	12	“	13
BRISTLES, American	do.	25	“	65
BUTTER, Table	do.	12	“	15
Shipping	do.	6	“	10
CANDLES, Mould, Tallow	do.	9	“	12
Sperm	do.	31	“	38
Stearic	do.	20	“	25
CHEESE	do.	4	“	7
CIDER BRANDY, Eastern	per gal.	35	“	40
Western	do.	28	“	35
CLOVER SEED	per lb.	9	“	10
COAL, Anthracite	2000 lbs.	5 00	“	6 00
Sidney and Pictou	per chal.	6 00	“	6 50
CORDAGE, American	per lb.	11	“	12
CORN, Northern	per bush.	55	“	56
Southern	do.	53	“	54
COTTON	per lb.	7	“	11
COTTON BAGGING, Amer. hemp	per yard.	16	“	18
American Flax	do.	15	“	16
FEATHERS	per lb.	27	“	31
FLAX, American	do.	8	“	8½
FLAX SEED, rough	per 7 bush.	9 00	“	9 25
clean	do.	— —	“	— —
FLOUR, Northern and Western	per bbl.	4 56	“	4 75
Fancy	do.	5 25	“	5 50
Southern	per bbl.	4 50	“	4 75
Richmond City Mills	do.	5 50	“	5 62
Rye	do.	3 00	“	3 25
HAMS, Smoked	per lb.	5	“	7
Pickled	do.	4	“	6
HAY	per 100 lbs.	40	“	45
HIDES, Dry Southern	per lb.	9	“	11
HEMP, Russia, clean	per ton.	185 00	“	190 00
American, water-rotted	do.	140 00	“	180 00
do dew-rotted	do.	90 00	“	140 00
HOPS	per lb.	6	“	8
HORNS	per 100	1 25	“	5 00
LARD	per lb.	5½	“	7
LEAD	do.	3½	“	4
Sheet and bar	do.	4	“	4½
MEAL, Corn	per bbl.	2 62	“	2 75
Corn	per hhd.	12 00	“	12 50
MOLASSES, New Orleans	per gal.	23	“	30
MUSTARD, American	per lb.	16	“	31
OATS, Northern	per bush.	31	“	33
Southern	do.	26	“	30
OIL, Linseed, American	per gal.	75	“	80
Castor	do.	85	“	90
Lard	do.	55	“	65
OIL CAKE	per 100 lbs.	1 00	“	— —
PEAS, Field.	per bush.	1 25	“	— —
PITCH	per bbl.	1 12½	“	1 37
PLASTER OF PARIS	per ton.	2 00	“	2 25
Ground, in bbls	per cwt.	50	“	— —
PORK, Mess	per bbl.	10 50	“	11 38
Prime	do.	9 25	“	10 12
RICE	per 100 lbs.	2 37	“	3 00
ROSIN	per bbl.	65	“	95
RYE	per bush.	63	“	64
SALT	per sack	1 35	“	1 50
SHOULDERS, Smoked	per lb.	3	“	4½
Pickled	do.	3	“	4
SPIRITS TURPENTINE, Southern	per gal.	36	“	38
SUGAR, New Orleans	per lb.	5	“	7½
SUMAC, American	per ton	25 00	“	27 50
TALLOW	per lb.	6	“	7½
TAR	per bbl.	1 25	“	1 50
TIMOTHY SEED	per 7 bush.	13 00	“	14 00
TOBACCO	per lb.	3	“	6½
TURPENTINE	per bbl.	2 62	“	2 87
WHEAT, Western	per bush.	1 00	“	1 05
Southern	do.	90	“	1 00
WHISKEY, American	per gal.	23	“	25
WOOL, Saxony	per lb.	35	“	50
Merino	do.	30	“	35
Half-blood	do.	25	“	27
Common	do.	18	“	22

New York Cattle Market—December 11.

At market, 900 beef Cattle, (200 from the south), 35 Cows and Calves, and 1500 Sheep and Lambs.

PRICES.—*Beef Cattle*—The market dull and declining, and we quote $4.25 *a* $4,50 to $5,00 *a* $5,25 for the best retailing. 150 unsold.

Cows and Calves.—All taken at $18 *a* $29.

Sheep and Lambs.—Sales of the latter at $1,12½ *a* $2,25, and of Sheep at 1,12½ to $4,50. 150 unsold.

Hay.—Sales at 5*s.* *a* 6*s.* per cwt. for loose.

—

REMARKS.—*Ashes* are dull, and the sales unimportant. *Coal*, the same. *Cotton*, on the arrival of the Acadia, declined from ¼ to ½ of a cent per lb.; but the price since has been gradually recovering, and it is now the same as per our last. This rise has not taken place so much in consequence of the ascertained short crop, as from a general advance in most other agricultural products, manufactures, and labor; the abundance of money and low rate of interest also have their effect, and it seems to be the settled opinion, that the price of cotton is more likely to advance during the season than recede. The transactions the past week have been large, with a buoyant market. Export from the United States since September last, 140,306 bales; same time last year, 220,862; same time year before, 163,845. *Flour.*—A steady business seems to be doing in this article, at a trifling reduction. *Grain* of all kinds in fair demand. *Hay* and *Hemp* dull. *Lead*, firm. *Molasses* and *Sugar*, little doing, and small stocks on hand. *Naval Stores*, without change. *Provisions* of all kinds quiet. *Rice*, a little more active. *Seeds*, firm for the season. *Tobacco* dull. *Wool* has increased in sales, and the foreign stock on hand has not been so light for several years. The prices are firm, and we are of opinion will gradually advance.

Money is ranging from 2½ to 4 per cent., on good paper, and is plenty as usual.

Stocks are very active, and about the same as our last—perhaps a slight advance.

Business generally is brought to a close, and has been an uncommonly good one the past season.

Hogs.—At Cincinnati the price has rather advanced within a few days; and this, taken in connexion with a considerable advance in cooperage and freights, has rendered buyers somewhat inclined to hold off a while. A fair quotation now for good light hogs is $2,30 *a* 2,40, though we heard of one sale on Friday, a small lot, at $2,00. Fair figures for the heavier descriptions, are $2,50 *a* 2,75; a large lot, however, averaging between 260 and 270 lbs., was sold at $2,70. Some two or three packing houses did a very heavy business last week, but the aggregate packed was we think considerably less than during any other week since operations fairly commenced.

ANSWER TO CORRESPONDENTS.—G. S. T. The price of the fowls you inquire about, is $3 per pair, in coop, delivered here. Any number of birds over, $1 each.

W. T. We have sent on to Boston to get cranberry sod, and silver fir-seed, but have no answer yet. Our directions were, to ship the box to Messrs. J. H. & R. A. G., via New Orleans.

F. N., will find himself answered about cream frothing, page 360. A Squatter, is answered page 354.

J. J. McCaughan, A. Beatty, L. F. Allen, F. J. Betts, H., J. H Lyman, S. B. Parsons, A. S., R. L. Allen, in our next.

The Prairie Farmer.—We are much obliged to Mr. Wright, editor of the Prairie Farmer, for the subscriptions forwarded us for the Agriculturist, and are happy to say in return, that we have recently received one for him, from a distinguished member of the British Parliament. He will please send us a copy complete of vol. 3d, and upon its reception, we shall forward it immediately to England. The Tennessee Agriculturist will please forward us its vol. 4th, the same gentleman having also subscribed for that.

HOVEY'S HORTICULTURAL MAGAZINE.

We have recently been appointed agents for this periodical, justly considered the most valuable of its kind in the United States. Any person subscribing through us will be promptly served, and we invite all interested in this subject to call and examine the work.

For any of the above works, or periodicals, or books of any kind, address SAXTON & MILES, 205 Broadway.

Price $3 a year.

American Agriculturist Almanac for 1844.

This work comprises 64 pages, double columns octavo, with numerous wood cuts, price $8 per hundred, 12½ cents each. In the contents will be found—Agricultural Statistics of the United States—Aspects and Nodes—Astronomical Calendars for Montreal, Boston, New York, Philadelphia, Charleston, and New Orleans—Characters and Names of the Planets, &c.—Farmers' Northern Calendars, with particular directions for the management of the Farm, Cattle, Fruit and Flower Garden, &c.—Southern Calendars for the Planter and Farmer, with explicit directions for the culture and harvesting of Cotton, Rice, Tobacco, &c., &c.

PROPOSAL FOR A COURSE OF LECTURES ON AGRICULTURAL CHEMISTRY.

By D. Pereira Gardner, M. D. Formerly Professor of Chemistry and Botany in Hampden Sidney College, Va., Member of the Lyceum of Natural History, New York.

The Course is intended to be of service to the practical agriculturist, and therefore the methods of discovering and estimating the amount of useful saline matters in the soil will be fully examined. Portions of Botany, Vegetable and Animal Physiology, will be included, to enable the farmer to understand all that relates to the food of plants and animals. Geology, so far as it is necessary to the study of soils and the art of drainage, will be introduced. The action of Manures, and the quantity that may be economically applied, will also be considered.

The Course will be fully illustrated by drawings, minerals, geological specimens, chemical experiments, and analysis.

The number of lectures will be twenty, distributed in nearly the following order :—

One Lecture—On the Constitution of the Atmosphere and Gaseous Matters.

One Lecture—On the Essential Structure of Vegetables.

One Lecture—On the Supply of Gaseous Food to Plants.

Two Lectures—On the Physical and Chemical Constitution of the Soil, and its relations to moisture and drought, the theory of drainage, fallows, &c.

One Lecture—On the Organic Food of Plants.

One Lecture—On the Mineral Food of Plants.

One Lecture—On the Influence of Gases, Water, and Saline Matters, on the production of nutritious substances in plants.

One Lecture—On the Nature of the Chemical Processes in Plants, and the methods of developing them.

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Four Lectures—On the Analysis of Soils, in which the methods of determining the quantities of saline and organic matters will be experimentally shown.

Two Lectures—On Mineral Manures, derivable from the geological formations of this and the adjoining States.

The classification of manures, mechanical, simple, complex, and organic; their values, preservation, and collection; the proportions in which they should be applied, &c., will conclude the course.

The Lectures will be delivered in the University of New York, on the evenings of Wednesday and Saturday, at half past seven o'clock. Fee for the course, 5 dollars.

The Lectures will commence on Wednesday, the 27th December, should a sufficient number of Subscribers be obtained.

Subscriptions received at SAXTON & MILES', 205 Broadway, office of American Agriculturist.

Just Published by SAXTON & MILES,

THE SILK QUESTION SETTLED.

The testimony of ONE HUNDRED AND FIFTY WITNESSES. Being the Report of the Proceedings of the National Convention of SILK-GROWERS AND MANUFACTURERS, held in New York, Oct. 13th and 14th, 1843. Published under the direction of the American Institute. By J. R. Barbour.

At the late Fair of the American Institute, held in the city of New York, upward of 150 letters were received from practical men in the different sections of the Union, embracing their own experience in the raising of silk, with a view of testing the question whether it is profitable to raise silk in this country. Those letters are imbodied in the present work, which contains a mass of evidence that is perfectly satisfactory, and showing that the raising of silk is a profitable employment, and destined to occupy a large share of public attention. Price 25 cents.

THE FARMER'S MINE, OR SOURCE OF WEALTH.

REVISED BY A. B. ALLEN.

This work treats of manures and the various methods by which the farmer may improve the value of his land, and increase the amount of his crops; showing how substances hitherto considered worthless, may be rendered valuable as manures, and land barren and unproductive may be made fertile. To know how to improve and enrich a farm without too much expenditure of means is, doubtless, the true secret of success in agriculture. The object of the present work is to open such a mine. Price 75 cents.

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A Farm wanted near New York, of 50 to 100 acres. It must have an attractive location, be easy of access to the city, and possess a good soil. One that has not expensive buildings on it would be preferred. Address the Editor of this paper, or box 354, lower Post Office, with general description, and stating where an interview may be had. 3t*

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Published Monthly, each number containing 32 pages, royal octavo.

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Editors of Newspapers noticing the numbers of this work monthly, or advertising it, will be furnished a copy gratis, upon sending such notice to this Office.

Volume I of THE AMERICAN AGRICULTURIST, with table of contents complete, for sale at $1; handsomely bound in cloth, $1 25. It is a neat and tasteful book, and makes a handsome premium for distribution with Agricultural Societies; to which, when several copies are ordered, a liberal discount will be made.

☞ To prevent confusion, all letters merely ordering this work, or enclosing money for subscriptions, should be addressed to Saxton & Miles, 205 Broadway, post-paid or franked by the Postmaster,

Communications for publication, to be directed to the Editor, and all *private* letters, or those on business disconnected with the paper, should be addressed, simply, A. B. Allen, 205 Broadway New York.

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Of the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New-York Poudrette Company, 23 Chambers street, New York. Orders by mail, with the cash, will be promptly attended to, and with the same care as though the purchaser was present, if addressed as above to

D. K. MINOR, Agent.

Dec. 1, 1843.—3t.

AGENTS FOR THE AMERICAN AGRICULTURIST.

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